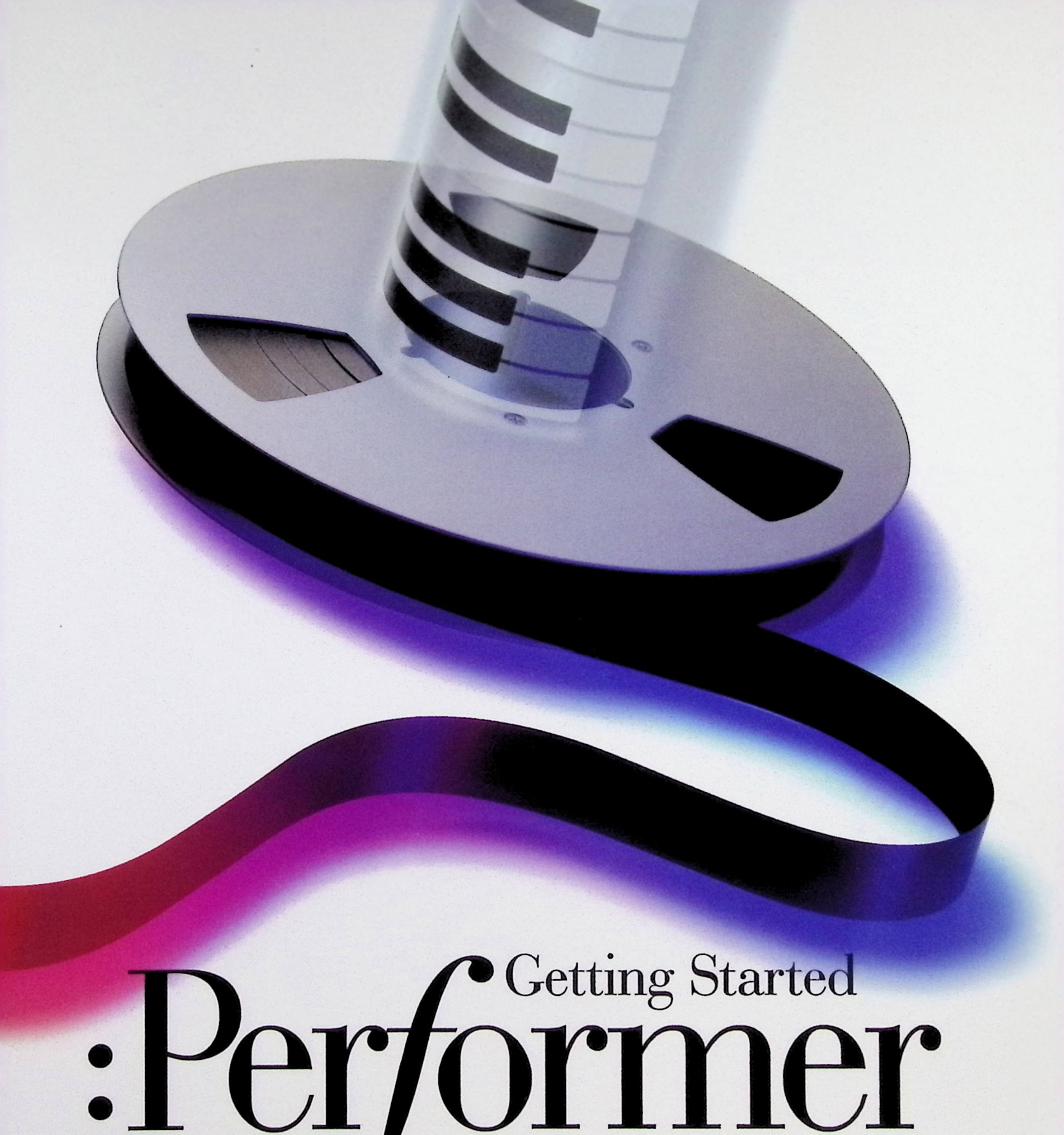

Getting Started

:Performer

THE MIDI SEQUENCER SOFTWARE

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Performer®

Getting Started

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Chapter 1 Welcome to Performer®

Welcome to Performer! Mark of the Unicorn is pleased to present you with our industry-leading professional sequencing environment for the Macintosh computer.

Mail in the Registration Card

Before you go any further, take a moment now to fill in and mail the registration card found at the beginning of the Performer Reference Manual, which accompanies this guide. Doing so entitles you to:

- A free backup master disk (if applicable)
- Free, unlimited technical support
- Free newsletters and software updates
- Announcements about major software upgrades and new products

Leave the rest of the cardboard page in the manual for your future reference. Since Mark of the Unicorn can provide customer service only to registered users, please be sure to send the card in immediately after purchase.

Overview of this guide

This guide is organized into six sections:

What's new in Performer Version 5

This section provides you with a brief overview of the advanced, state-of-the-art features added to Performer in this major upgrade.

Installation

This section is for beginners and Macintosh sequencing experts alike. It provides step-by-step installation and setup instructions for those who would like them, including how to customize Performer for operation in your MIDI studio. It also provides summary information for expert users regarding unique aspects of Performer's installation (such as the FreeMIDI setup process).

Tutorials

This section provides the following introductory approaches to Performer:

- A picturebook tour, which gives a short overview of Performer's main windows and features.
- A short tutorial to teach you how to record a single track.
- A longer tutorial that introduces you to most of Performer's main features and helps you record a short, multiple track sequence, including a cycle-recorded drum loop and step-recorded chords.

Other FreeMIDI Releases

Performer Version 5 offers MIDI software system integration with the Mark of the Unicorn products listed below. If you have purchased one or more of these products, read this section for important information about how to use them together with Performer Version 5.

- Unisyn
- MIDI Time Piece II
- MIDI Express

Appendices

The appendices provide important information about using Performer Version 5 with OMS and MIDI Manager. There is also a troubleshooting and customer support appendix.

Part I

New Features

Chapter 2 What's New in Performer® 5

Performer Version 5 is packed with the following new features and enhancements:

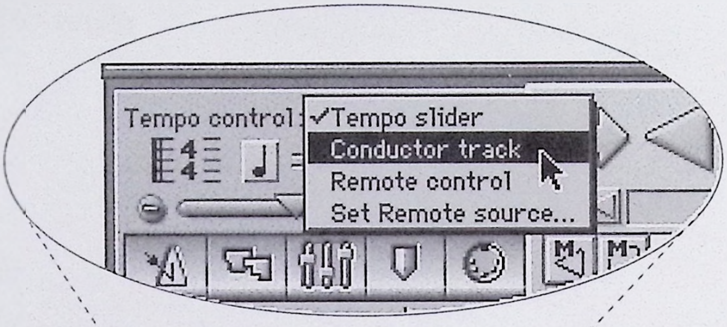
- Redesigned interface
- Groove Quantize and Create Groove
- Cycle-recording with instant update and spot-erase
- Enhanced Split Notes command
- Better music notation display, editing, note entry, printing, and vastly improved transcription algorithms in the QuickScribe Notation window
- Support for MIDI Machine Control devices such as the Alesis ADAT™, the Akai DR4d, and the Tascam DA-88
- Large counter window for improved visibility in the recording studio
- MIDI System Integration with FreeMIDI
- Bank select
- DNA™ Grooves and DrumTrax™ Special Edition drum patterns included free of charge
- Many other enhancements

The following pages provide a glimpse into these new features, along with page references to the Performer Reference Manual.

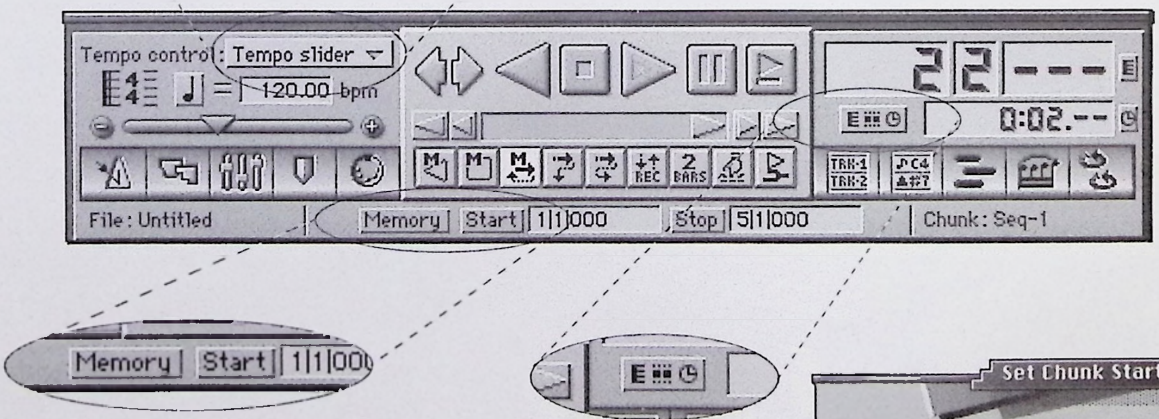
For a similar overview of Performer's main features, see chapter 7, "Performer Overview: A Picturebook Tour" (page 69).

Redesigned interface

If you just upgraded to Version 5, don't worry! You won't have to learn a whole new program. Performer is still Performer. But we *have* added a pleasing color interface to all Performer's familiar features, along with many refinements. Version 5 even looks great on a black and white monitor, but once you see it running on a color monitor, you'll never look back. Below are a few highlights of the new look and feel.

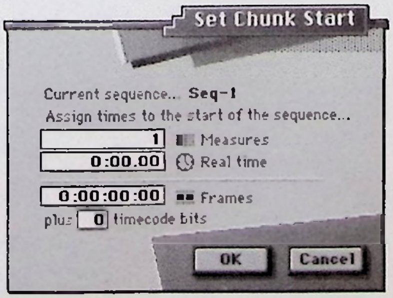

Tempo control:
✓Tempo slider
Conductor track
Remote control
Set Remote source...

In addition to the new look and feel, Version 5 is full of refinements. The example shown here is the new Tempo Control pop-up menu in the Metronome panel.


Tempo control: Tempo slider
120.00 bpm
2 BARS
REC
TRK-1
TRK-2
0:02.--
File: Untitled
Memory
Start
1|1|000
Stop
5|1|000
Chunk: Seq-1

You'll find that many of Performer's existing features are greatly enhanced and clarified by color. You may even discover features and shortcuts that you never knew existed.

Many enhancements in Version 5 are the direct result of feedback from Performer's thousands of users. The new Start Time button has been added to the main counter to quickly allow you to set SMPTE offsets and add pick-up measures.



Set Chunk Start

Current sequence... **Seq-1**

Assign times to the start of the sequence...

1 Measures

0:00.00 Real time

0:00:00:00 Frames

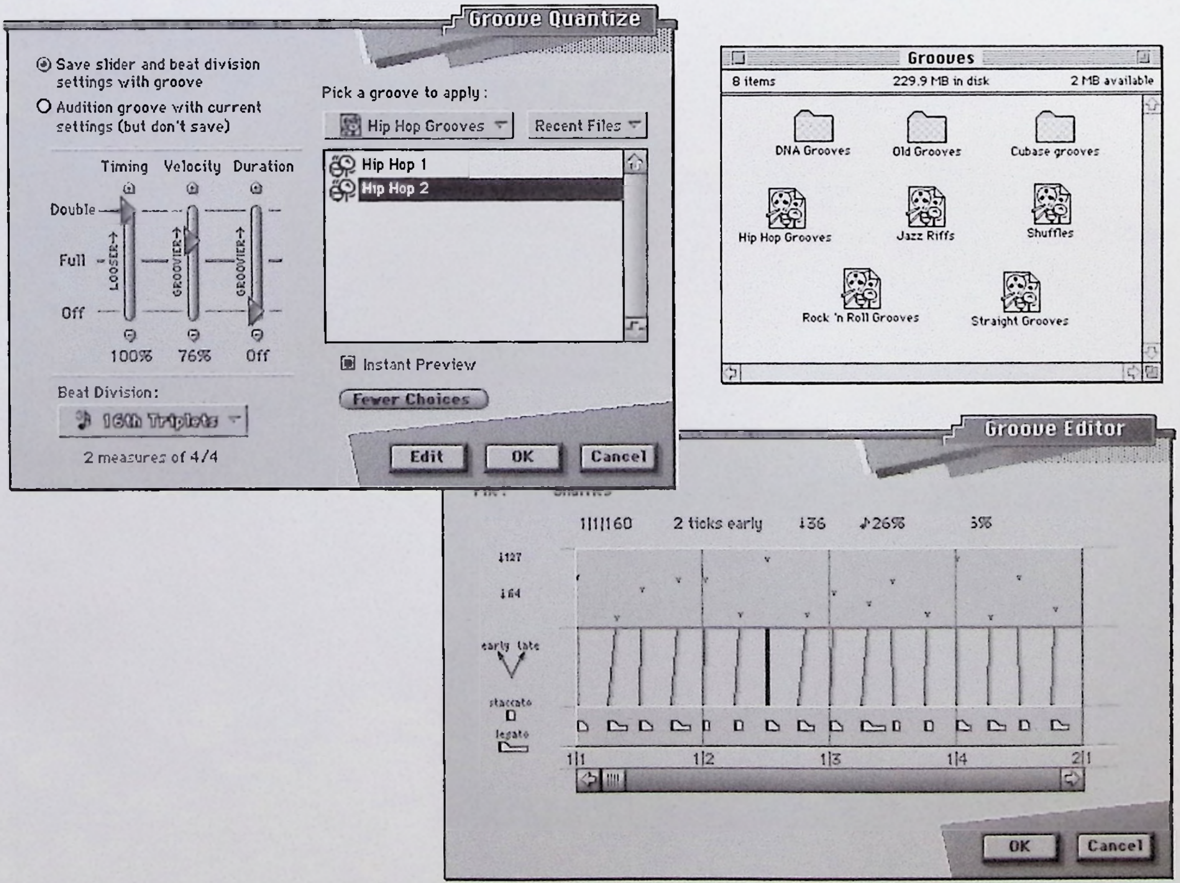
plus 0 timecode bits

OK Cancel

Groove Quantize and Create Groove

For more information, see chapter 30, "Groove Quantize" (page 487) in the Reference Manual.

Performer's Groove Quantize and Create Groove commands in the Region menu add a new dimension to sequencing. A groove is a unique rhythmic feel that you can instantly apply to your music. You get immediate feedback as you dynamically adjust the feel of grooves with faders. Use the Create Groove command to create your own grooves, of any length, from any music you have recorded into Performer or loaded from a standard MIDI file. Then apply it to any other track, and even edit the groove to perfect the feel. You can build your own groove library, or purchase commercially available libraries with hundreds of carefully crafted grooves. Performer Version 5 even ships with a sample library of DNA™ grooves, including straight, shuffle, laid back, and pushing grooves.



Groove Quantize

● Save slider and beat division settings with groove
○ Audition groove with current settings (but don't save)

Timing: 100%
Velocity: 76%
Duration: Off

Beat Division: 16th Triplets
2 measures of 4/4

Pick a groove to apply: Hip Hop Grooves
Hip Hop 1
Hip Hop 2

☑ Instant Preview

Grooves
8 items 229.9 MB in disk 2 MB available

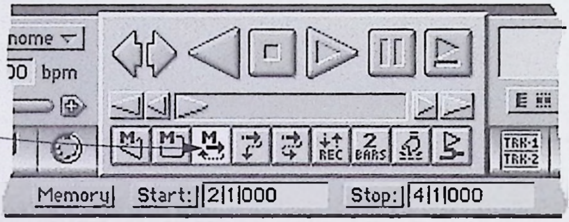
Groove Editor
1|1|160 2 ticks early 136 ♪26% 5%

Double
Full
Off
LOOSER
GROOVIER
GROOVIER
Recent Files
Fewer Choices
Edit
OK
Cancel
DNA Grooves
Old Grooves
Cubase grooves
Hip Hop Grooves
Jazz Riffs
Shuffles
Rock 'n Roll Grooves
Straight Grooves
127
64
early late
staccato
legato
1|1
1|2
1|3
1|4
2|1
OK
Cancel

Cycle-record with instant update and spot-erase

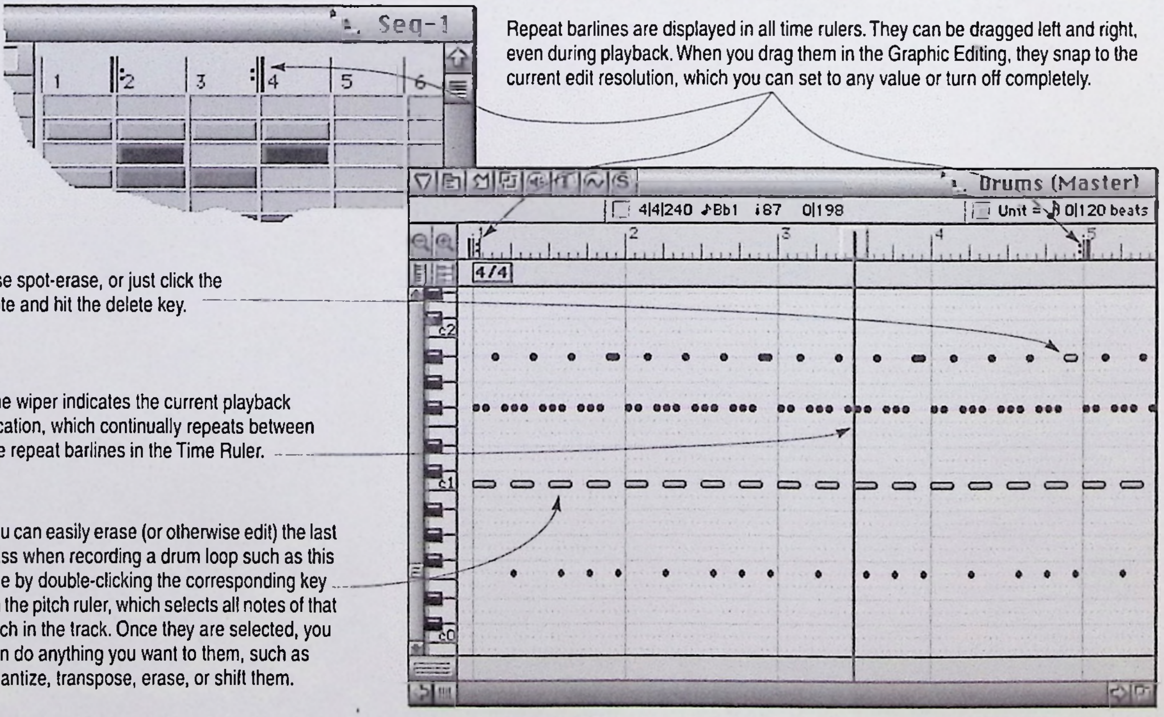
For more information about this feature, see "Cycle-recording" on page 130 in the Performer Reference Manual.

Performer is now more interactive than ever when it comes to building loops in real time. Three key enhancements make Performer a powerhouse for drum machine style loop-recording. First, Performer's main counter loops seamlessly, just like traditional drum-machine style pattern recorders with the improved Memory-shuttle feature. Secondly, notes and other data show up immediately as you record them, so with a graphic or notation editing window open while you record, you can immediately edit the notes you record without ever hitting the stop button. Finally, a new spot-erase remote control lets you erase notes while cycle-recording by holding down the key for the pitch you want to erase, just like your favorite drum machine or hardware sequencer.



Memory-cycle button

Memory bar start and stop times are displayed here. You can change them by typing or by clicking the Start and Stop buttons on the fly during playback.



Repeat barlines are displayed in all time rulers. They can be dragged left and right, even during playback. When you drag them in the Graphic Editing, they snap to the current edit resolution, which you can set to any value or turn off completely.

Use spot-erase, or just click the note and hit the delete key.

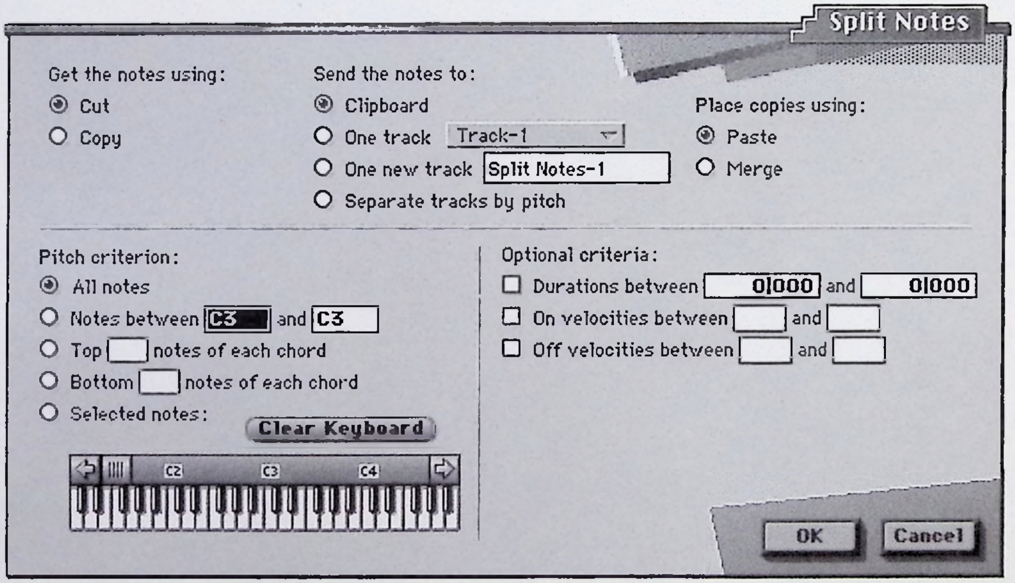
The wiper indicates the current playback location, which continually repeats between the repeat barlines in the Time Ruler.

You can easily erase (or otherwise edit) the last pass when recording a drum loop such as this one by double-clicking the corresponding key on the pitch ruler, which selects all notes of that pitch in the track. Once they are selected, you can do anything you want to them, such as quantize, transpose, erase, or shift them.

Enhanced Split Notes command

Split Notes has been greatly enhanced to save you valuable time. Split notes can now automatically create a new track and Paste the split notes to it. It can even create a set of new tracks and Paste the split notes to each track according to their pitch. You can select what pitches to split by playing them on your MIDI controller.

For more information, see "Split Notes" on page 441 in the Performer Reference Manual.



Split Notes

Get the notes using:
● Cut
○ Copy

Send the notes to:
● Clipboard
○ One track Track-1
○ One new track Split Notes-1
○ Separate tracks by pitch

Place copies using:
● Paste
○ Merge

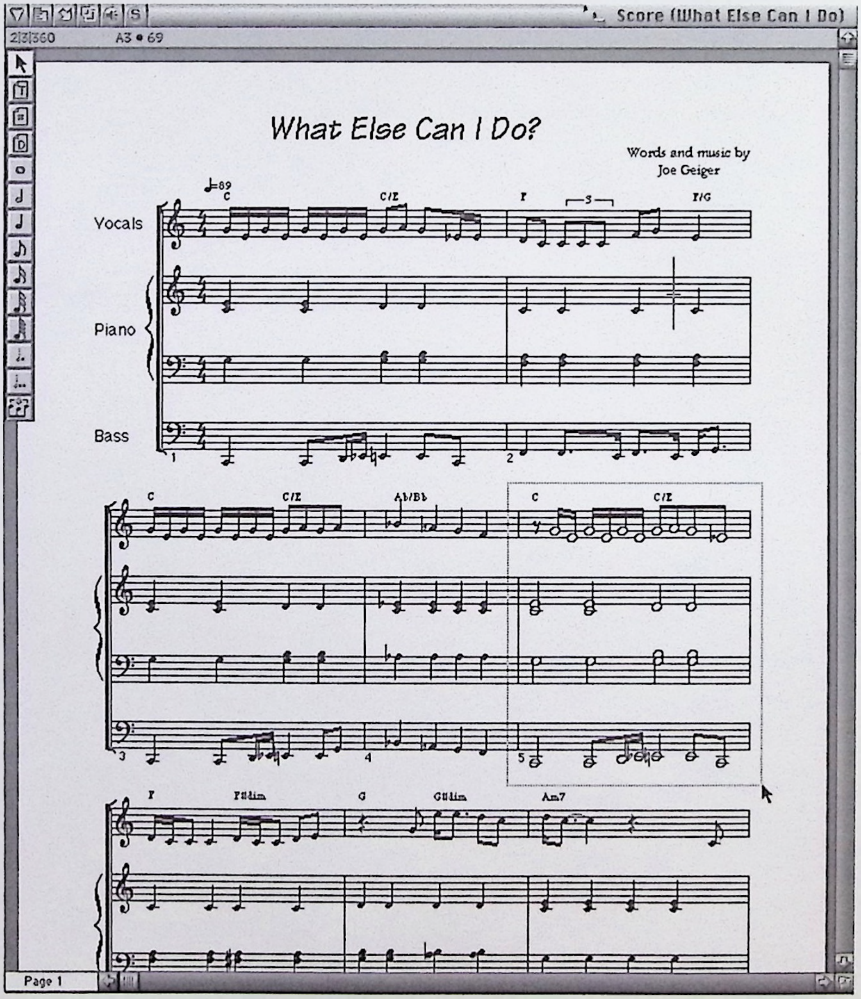
Pitch criterion:
● All notes
○ Notes between C3 and C3
○ Top notes of each chord
○ Bottom notes of each chord
○ Selected notes:

Optional criteria:
☐ Durations between 0|000 and 0|000
☐ On velocities between and
☐ Off velocities between and

Better notation transcription, editing, and note entry

Performer Version 5 provides more advanced music notation features, including new MIDI transcription technology that produces the most accurate transcription ever in Performer. In addition, Performer's enhanced QuickScribe window now provides palette-based note entry and editing directly on the page. Note insertion is especially improved. Text is now handled with familiar, Macintosh-style text boxes to give you complete flexibility.

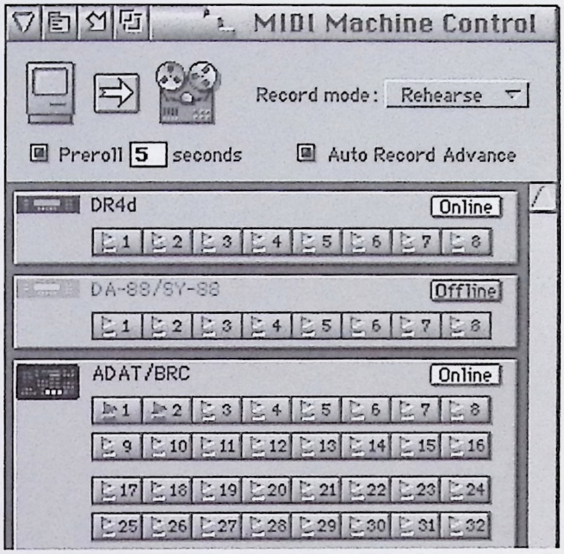
For more information, see chapter 23, "QuickScribe Notation" (page 345) in the Performer Reference Manual.


Score (What Else Can I Do)
2|3|360
A3 • 69
What Else Can I Do?
Words and music by
Joe Geiger
♩=89
C
C/E
F
F/G
Vocals
Piano
Bass
1
2
C
C/E
Ab/Bb
C
C/E
3
4
5
F
F#dim
G
G#dim
Am7
Page 1

MIDI Machine Control

Performer Version 5 serves as a command center for the modern desktop recording studio. MIDI Machine Control allows you to manipulate the transport controls of popular multi-track recording systems such as the Alesis ADAT™, Akai DR4d, and Tascam DA-88. Play, stop, rewind, fast forward, record-enable, and punch in and out, all from Performer's familiar tape-deck style transport controls.

For more information, see chapter 39, "Using MIDI Machine Control" (page 629) in the Performer Reference Manual.



Record mode: Rehearse

☒ Preroll 5 seconds

☒ Auto Record Advance

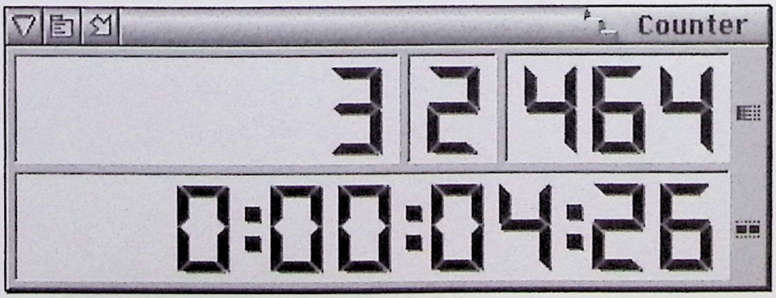
DR4d Online

DA-88/SY-88 Offline

ADAT/BRC Online

Large counter display

The counter window has been enlarged to improve visibility in the recording studio. All three time formats can be displayed. Other than its increased size, this window functions exactly as explained in the Reference Manual in chapter 11, "The Counter Window" (page 161).



3 | 2 | 464

0:00:04:26

MIDI System Integration with FreeMIDI

FreeMIDI is a Macintosh system extension that is automatically placed in the System Folder when you install Performer Version 5. FreeMIDI is easy to use because it is seamlessly integrated with Performer, and provides many advantages for all FreeMIDI-compatible software, including:

- A "virtual" studio on your Macintosh that graphically mirrors your entire MIDI hardware setup and is shared by all FreeMIDI-compatible programs
- A simple, intuitive pop-up list of your MIDI devices whenever you need it in any FreeMIDI program
- A pop-up list sound list for each one of your MIDI devices, which make it easy for you to choose sounds by name
- The ability to start playback, stop playback, rewind and cue all FreeMIDI-compatible programs at once (For example, you can slave Mosaic to SMPTE time code via Performer and FreeMIDI.)

To see how easy it is to set up your FreeMIDI studio, see chapter 5, "Getting Started With FreeMIDI™" (page 41).

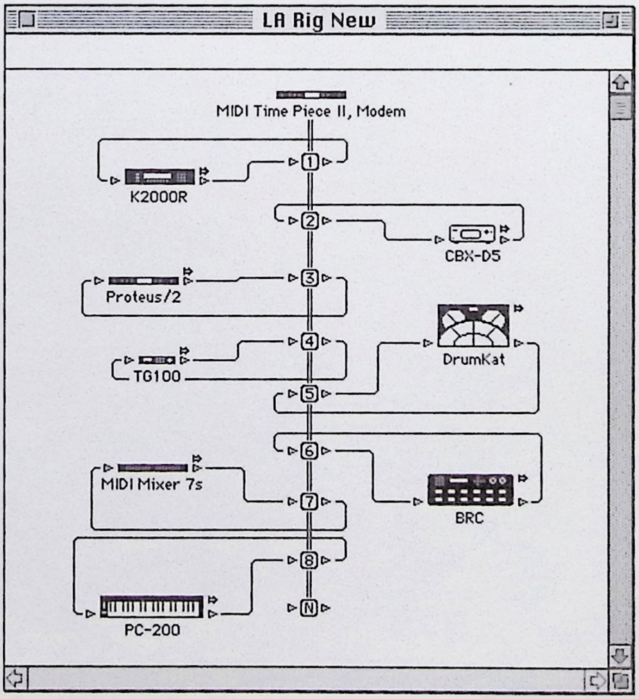
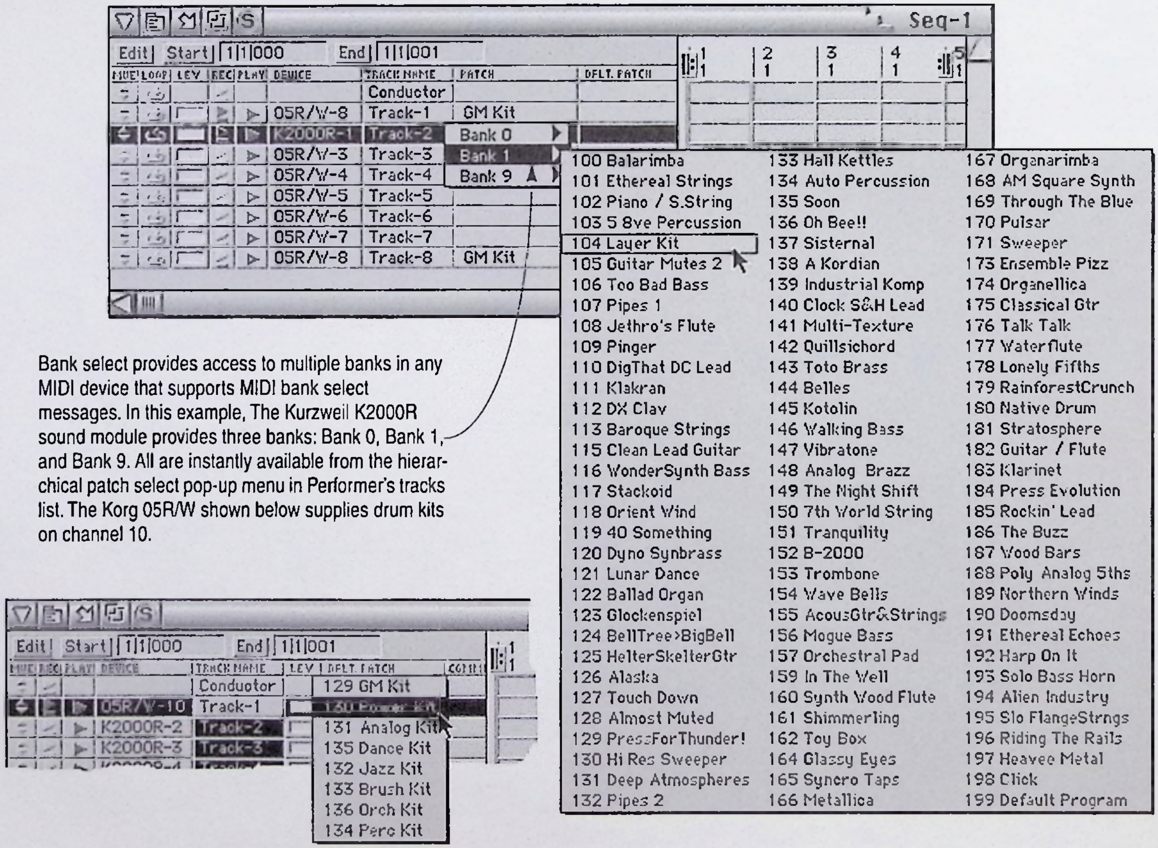


Figure 2-1: FreeMIDI provides an intuitive, graphical representation of your MIDI studio. You can arrange the icons in the window to match their location in your studio using familiar Macintosh System 7 conventions.

Bank select

For more information, see "Using Multiple Patch Lists & Bank Select Messages" on page 747 in the Performer Reference Manual.

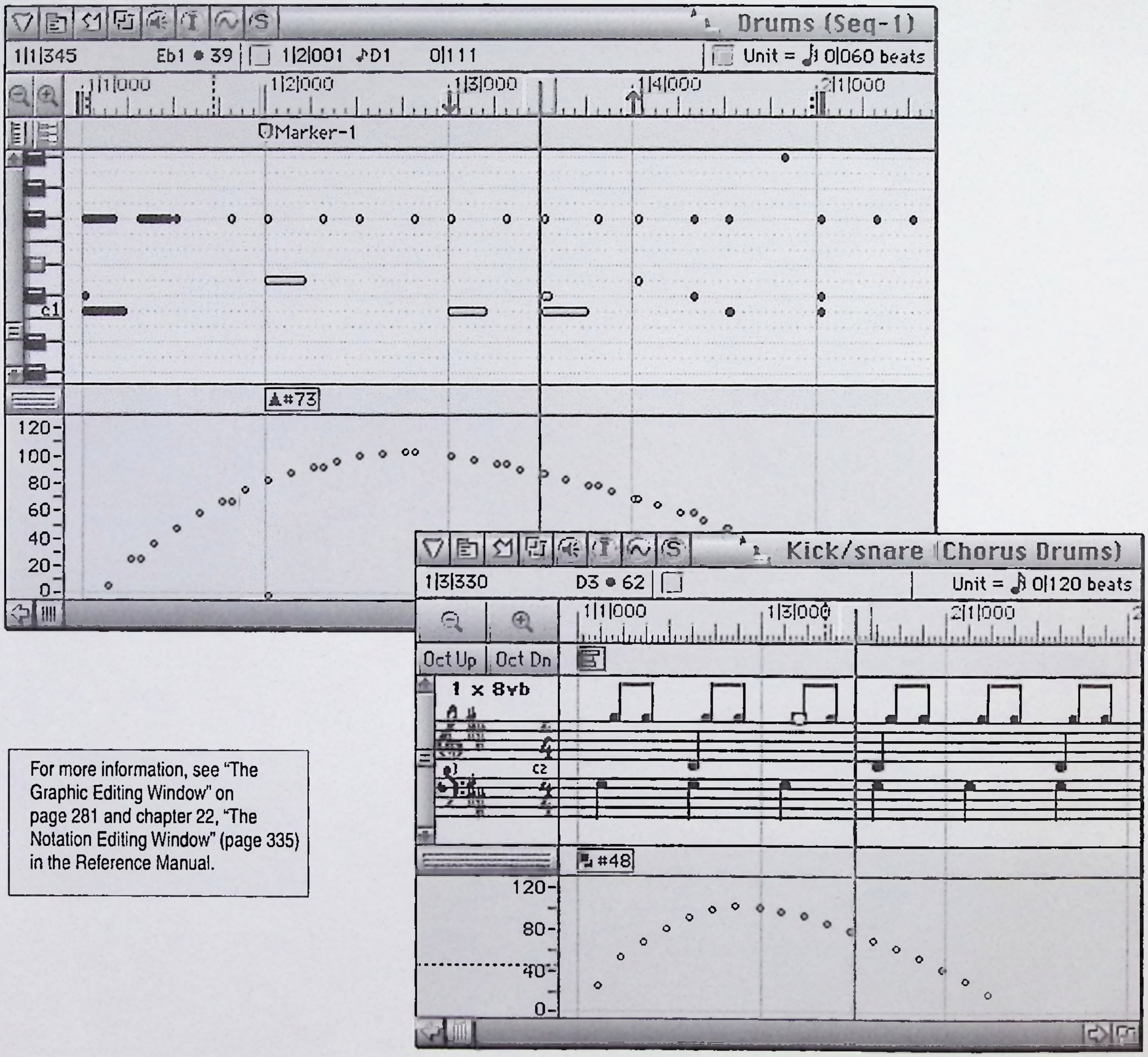
Together, Performer and FreeMIDI let you break the 128-sound barrier imposed by the MIDI patch change event. Now, you have hundreds of sounds at your fingertips from within Performer using any sound module or keyboard in your MIDI studio that supports MIDI bank select messages. FreeMIDI provides hierarchical pop-up patch list menus in Performer that let you select any sound from any bank instantly. You can even sort the patch lists alphabetically to help you find sounds more quickly.


Seq-1
Edit
Start
1|1|000
End
1|1|001
MUTE
LOOP
LEV
REC
PLAY
DEVICE
TRACK NAME
PATCH
DFLT. PATCH
Conductor
05R/W-8
Track-1
GM Kit
K2000R-1
Track-2
Bank 0
Bank 1
Bank 9
05R/W-3
Track-3
05R/W-4
Track-4
05R/W-5
Track-5
05R/W-6
Track-6
05R/W-7
Track-7
05R/W-8
Track-8
GM Kit
100 Balarimba
101 Ethereal Strings
102 Piano / S.String
103 5 8ve Percussion
104 Layer Kit
105 Guitar Mutes 2
106 Too Bad Bass
107 Pipes 1
108 Jethro's Flute
109 Pinger
110 DigThat DC Lead
111 Klakran
112 DX Clav
113 Baroque Strings
115 Clean Lead Guitar
116 WonderSynth Bass
117 Stackoid
118 Orient Wind
119 40 Something
120 Dyno Synbrass
121 Lunar Dance
122 Ballad Organ
123 Glockenspiel
124 BellTree>BigBell
125 HelterSkelterGtr
126 Alaska
127 Touch Down
128 Almost Muted
129 PressForThunder!
130 Hi Res Sweeper
131 Deep Atmospheres
132 Pipes 2
133 Hall Kettles
134 Auto Percussion
135 Soon
136 Oh Bee!!
137 Sisternal
138 A Kordian
139 Industrial Komp
140 Clock S&H Lead
141 Multi-Texture
142 Quillsichord
143 Toto Brass
144 Belles
145 Kotolin
146 Walking Bass
147 Vibratone
148 Analog Brazz
149 The Night Shift
150 7th World String
151 Tranquility
152 B-2000
153 Trombone
154 Wave Bells
155 AcousGtr&Strings
156 Mogue Bass
157 Orchestral Pad
159 In The Well
160 Synth Wood Flute
161 Shimmerling
162 Toy Box
164 Glassy Eyes
165 Synero Taps
166 Metallica
167 Organarimba
168 AM Square Synth
169 Through The Blue
170 Pulsar
171 Sweeper
173 Ensemble Pizz
174 Organellica
175 Classical Gtr
176 Talk Talk
177 Waterflute
178 Lonely Fifths
179 RainforestCrunch
180 Native Drum
181 Stratosphere
182 Guitar / Flute
183 Klarinet
184 Press Evolution
185 Rockin' Lead
186 The Buzz
187 Wood Bars
188 Poly Analog 5ths
189 Northern Winds
190 Doomsday
191 Ethereal Echoes
192 Harp On It
193 Solo Bass Horn
194 Alien Industry
195 Slo FlangeStrngs
196 Riding The Rails
197 Heavee Metal
198 Click
199 Default Program
Edit
Start
1|1|000
End
1|1|001
DEVICE
TRACK NAME
LEV
DFLT. PATCH
Conduotor
129 GM Kit
05R/W-10
Track-1
K2000R-2
Track-2
131 Analog Kit
K2000R-3
Track-3
135 Dance Kit
132 Jazz Kit
133 Brush Kit
136 Orch Kit
134 Perc Kit

Bank select provides access to multiple banks in any MIDI device that supports MIDI bank select messages. In this example, The Kurzweil K2000R sound module provides three banks: Bank 0, Bank 1, and Bank 9. All are instantly available from the hierarchical patch select pop-up menu in Performer's tracks list. The Korg 05R/W shown below supplies drum kits on channel 10.

Enhanced Graphic Editing

The Graphic Editing and Notation Editing windows have been redesigned to show more data in a clearer fashion.


Drums (Seq-1)
1|1|345
Eb1 ● 39
1|2|001 ♪D1
0|1 1 1
Unit = ♬ 0|060 beats
1|1|000
1|2|000
1|3|000
1|4|000
2|1|000
Marker-1
C1
#73
120
100
80
60
40
20
0
Kick/snare (Chorus Drums)
1|3|330
D3 ● 62
Unit = ♬ 0|120 beats
1|1|000
1|3|000
2|1|000
Oct Up
Oct Dn
1 x 8vb
C2
#48
120
80
40
0

For more information, see "The Graphic Editing Window" on page 281 and chapter 22, "The Notation Editing Window" (page 335) in the Reference Manual.

DNA Grooves & DrumTrax ™ patterns

Performer Version 5 ships with 50 free DNA Grooves created by WC Music Research, an industry leader in rhythmic analysis. These grooves can be fully incorporated into Performer's new Groove Quantize features. DNA Grooves provide a variety of feels derived from hit records and drum tracks by top studio drummers; they can be varied by the Groove Quantize beat divisions to provide a total of 500 distinct Groove styles.

Version 5 also ships with the DrumTrax™ Special Edition drum pattern library, a set of drum patterns in Performer format that offer a variety of popular percussion styles. Created by professional studio drummers, these patterns can be used as the rhythmic foundation for sequences, as practice material, and as inspiration for new ideas. The DrumTrax Special Edition also includes Humanize maps to generate new patterns and fills.

Other enhancements

If you are upgrading from previous versions of Performer, you'll notice many refinements. Here are just a few:

- You can now click on the text for radio button and check boxes to select the button.
- Step Record now locks to the main controls in a more intuitive fashion, playing the rest of the sequence as you step. Step Record is more fun than ever before.

Part II

Installation

Chapter 3 Performer System Requirements

To avoid problems later on, carefully review the information in this chapter before you install Performer.

This chapter provides important requirements and recommendations for the following components in your Macintosh computer system:

- Type of Macintosh
- Type of monitor
- RAM (memory)
- System software

Computer Requirements

Below is a chart summarizing how Performer supports each type of Macintosh computer. A Macintosh with a 68020 processor or faster is required, as well as a hard disk and a total of at least 5 megabytes (MB) of RAM.

Not supported:†	Supported:*	Recommended:
512K	Classic II, Color Classic	SE/30
512KE	LC/LC II	LC III, LC 475, 520, 550, 575
Plus	Mac II, IIx, IIcx, IIvi	IIci, IIsi, IIvx, IIfx
SE	Performa 200, 400, 405, 410, 430	PowerBook 145, 145B, 160, 165, 165c, 170, 180, 180c, 520, 520c, 540, 540c
Classic	PowerBook 140	Centris 610, 650, 660AV
PowerBook 100		Quadra 605, 610, 650, 700, 800, 840AV, 900, 950
Portable		Performa 450, 460, 466, 467, 475, 476, 550, 560, 575, 577, 578, 600
		Duo 210, 230, 250, 270c, 280, 280c
		Power Macintosh 6100/60, 6100/60AV, 7100/66, 7100/66AV, 8100/80, 8100/AV, 8100/110, 8100/110AV

☛ *You may experience delays in Performer because of the slower microprocessor in these machines.

☛ †Any of these Macs may experience problems with Performer Version 5 if an accelerator with a 68020, 68030, or 68040 processor is installed.

Please note that these computer requirements may change as future updates become available.

Computer Recommendations

The faster the Macintosh, the more responsive Performer is. Scrolling during playback is smoother, the counter updates regularly, and actions that you take with the program are faster—especially during playback. Below is a list of eligible Macintosh computers, ranked approximately from slowest to fastest, moving from top to bottom respectively in the list:

Computer:	Processor type:	Processor clock:
LC & Mac II	68020	16 MHz
Mac SE/30, IIx, IIcx, IIvi, Classic II, Color Classic, LC II, PowerBook 140, Performa 200, 400, 405, 410, 430	68030	16 MHz
IIsi	68030	20 MHz
IIci, PowerBook 145, 145B, 160, 170, LC III, Duo 210, LC 520, Performa 450	68030	25 MHz
Performa 600, IIvx	68030	32 MHz
PowerBook 165, 165c, 180, 180c Duo 230, 250, 270c, LC 550, Performa 460, 466, 467, 550, 560	68030	33 MHz
IIfx	68030	40 MHz
Centris 610	68LC040	20 MHz
Quadra 605 LC 475, Performa 475, 476 PowerBook 520, 520c	68LC040	25 MHz
LC 575, Performa 575, 577, 578, Duo 280, 280c, PowerBook 540, 540c	68LC040	33 MHz
Centris 650, Quadra 610, 660AV, 700, 900	68040	25 MHz
Quadra 650, 800, 950	68040	33 MHz
Quadra 840AV	68040	40 MHz
Power Macintosh 6100/60, 6100/60AV	PowerPC 601	60 MHz
Power Macintosh 7100/66, 7100/66AV	PowerPC 601	66 MHz
Power Macintosh 8100/80, 8100/80AV	PowerPC 601	80 MHz
Power Macintosh 8100/110, 8100/110AV	PowerPC 601	110 MHz

Math Co-processors

Math co-processors do not have an effect on Performer's speed of operation.

Accelerator Boards

Performer's speed of operation is increased by accelerator boards that enhance or replace the computer's CPU—and thus speed up all operations on the computer. We strongly recommend that when you purchase an accelerator, you purchase it on a "try-before-you-buy" basis because some accelerators can be fundamentally incompatible with Performer. Please contact Mark of the Unicorn Technical Support at (617) 576-3066 before you purchase an accelerator board in order to check compatibility with Performer.

RAM Recommendations

If you will be working with sequences that contain lots of MIDI data, you may need more than the minimum recommendation of 6 MB, depending on the size of your system software and the amount of additional start-up software or other applications you run at the same time as Performer.

How to Check RAM

To check how much RAM your Macintosh has, choose *About this Macintosh* (or *About the Finder* in System 6) from the Apple menu and look for the Total Memory indication.

When you run Performer, the Memory Monitor displays the amount of free memory (RAM) available to Performer. Try to keep at least 150K free. To increase this amount in MultiFinder or System 7, quit Performer, select the Performer program icon, and choose Get Info from the File menu. Increase the application memory size in the Get Info window.

Monitor Recommendations

Performer is designed specifically for the following screen depths:

- Black and white (1 bit)
- 256 colors or grays (8-bit)

To set your monitor to one of these color depths, use the Monitors Control Panel in the Apple menu.

System Software

To run Performer, a Macintosh computer must be booted with System System 6.0.7 or higher. System 7 is recommended. Please note that these minimum requirements may change in future updates.

To obtain the version number of the System and Finder files, choose *About this Macintosh…*(or *About the Finder* in System 6) from the Apple menu just after you switch on the computer.

To determine Performer's version number, run Performer and choose About Performer from the Apple menu. A window then displays Performer's logo and version number. This is the same screen that you see when you first run the program. This display remains until you click the mouse.

Installing 32-bit QuickDraw in System 6 for Color

If you are running in System 6, and you would like to run Performer in color, 32-bit Color QuickDraw must be installed in the system. 32-Bit Color QuickDraw is built into some Macintoshes running System 6.0.7 or 6.0.8, but not all. If not, Performer will display in black and white. If you would like to run Performer in color in this case, use the Customize option on your System 6 installer disks to install 32-Bit Color QuickDraw.

FreeMIDI is Required

Performer requires FreeMIDI, a Macintosh System Folder extension developed by Mark of the Unicorn. FreeMIDI is automatically placed in your system when you install Performer as described in this booklet.

FreeMIDI greatly enhances the way in which Performer interacts with your MIDI hardware. It provides Performer with the names of all of your MIDI hardware devices, and it even provides Performer with the names of the sounds currently available in each one of your MIDI synthesizers.

Performer 5uses TrueType™

Mark of the Unicorn has developed a TrueType music font called QuickScribe™ to support Performer Version 5's notation printing and editing features. This font is provided free of charge with Performer, and provides the highest possible printing quality and screen display available on the Macintosh. It is automatically installed in your Macintosh System Folder by the Performer installer.

In System 7, no special preparations are required for the use of this font.

In System 6, TrueType fonts require a minimum of System 6.0.7, LaserWriter Driver 6.1 or higher, and the TrueType INIT. (An INIT is a startup document that should be placed in the top level of the System Folder.) The TrueType INIT is automatically installed, if necessary, when you run the Performer installer.

Do Not Use Virtual Memory

Do not use Virtual Memory with Performer. Virtual memory causes the computer to operate too slowly for Performer to maintain real-time operations such as playback and recording.

Support for 32-bit memory in System 7

Performer supports the use of extended RAM with 32-bit memory mode in System 7.

MultiFinder

Performer is compatible with MultiFinder, which allows several applications to run concurrently in System 6. At least 5 megabytes of RAM are required to run MultiFinder with Performer. More RAM may be required depending on the number and size of the applications you are running together.

In MultiFinder, you should only switch to other applications from the main Performer screen. Avoid switching in the middle of a command, or while working in a dialog box.

By default, Performer allocates a certain amount of memory to itself in MultiFinder. To assign more, Get Info on the Performer icon and type in a large application memory size.

MIDI Hardware Requirements

The following MIDI hardware is the minimum necessary to work with Performer:

- a standard MIDI/Macintosh interface
- at least two MIDI cables
- at least one MIDI device

Chapter 4 *Installing Performer*

This chapter provides step-by-step instructions for installing Performer. It also contains helpful information about the installation process.

Running the installer

All Mark of the Unicorn software products are installed for you by an installer utility on the product's master disk. For software that ships on several disks, such as Performer, the master disk is the one with the glossy, colored label.

To run the installer:

1. **Disable all Control Panel Devices and Extensions, including virus protection utilities such as SAM, Virex, Vaccine, Disinfectant, or GateKeeper during the installation process.**

   These files can sometimes interfere with installation. To do so under System 7, restart or turn on your Macintosh with the shift key held down until you see the message, "Extensions Off", which appears right after "Welcome to Macintosh". Doing so turns off all extensions until the computer is restarted. Under System 6, remove all non-Apple INIT's and Control Panel devices from your System Folder and then Restart your Macintosh. It is especially important to do this right before you install the program and authorize the hard disk. Once the program has been installed and authorized, you can re-enable them.

2. **Insert the master disk and run the installer by double-clicking the icon called "Double-click to install".**

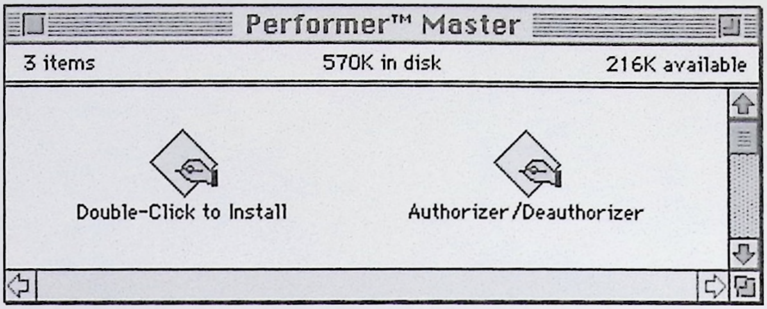


Figure 4-1: The Performer master disk, with the installation and authorizing utilities.

3. **Follow the directions that the installer gives you, and insert the appropriate disks when they are requested.**

   When you finish, the installer may ask you to restart.

   > ☛ If you have more than one hard disk, the installer may only let you install on hard disks that have a System Folder on them. If you want to install on a disk that doesn't, install on a hard disk that does and copy the resulting folder to the desired disk afterwards.

For Quadra 900, 950 and IIfx users

If you have one of these computers, the installer places the Serial Switch control panel into the System. Before you proceed any further in the installation, you must set the Serial Switch control panel to *compatible* before you run Performer.

To set the Serial Switch control panel to *compatible*:

1. **Choose Control Panel from the Apple menu.**
2. **Double-click the Serial Switch icon.**
3. **Select the "Compatible" option.**
4. **Close the Control Panel and choose Restart from the Special menu.**

What does the installer do?

The installer checks the computer to make sure it meets the hardware and software requirements necessary to run the program. If so, the installer places the program in a folder on the top level of the hard disk, along with several additional files in some cases. The installer also adds other necessary files to your Macintosh System Folder such as fonts, system extensions, and other necessary items.

The following table provides a summary. The information in this table is subject to change.

Installed item:	**Explanation:**
Performer	The program itself is placed in a folder with the same name on the top level of your hard disk.
FreeMIDI System Extension	This system extension is placed in your System Folder and serves as an integrated MIDI operating system for all FreeMIDI-compatible software. It it required by all Mark of the Unicorn programs.
FreeMIDI Folder	This folder is placed in your System Folder and contains files that are required by FreeMIDI.
FreeMIDI Applications Folder	This folder is placed on the top level of your hard disk. It contains several programs that help you configure FreeMIDI.
FreeMIDI Setup™	FreeMIDI Setup is a program found in the FreeMIDI Applications folder. It allows you to create a FreeMIDI Configuration, which describes your MIDI studio and is required for MIDI recording and playback.
PatchList Manager™	PatchList Manager™ is a program in the FreeMIDI Applications folder. It obtains the names of the sounds in your MIDI synthesizers so you can choose sounds by name from within any FreeMIDI-compatible program.

Serial Switch	If you have a Quadra 900, 950, or Macintosh IIfx, this system extension is placed in the Control Panels folder by the installer to allow MIDI communication on the modem and printer ports. Without it, none of your MIDI software would work. Once it is installed, it must be set to "Compatible" mode.
Unicorn Power	If you have a Macintosh PowerBook 140, 145, 145B, 160, 165, 165c, 170, 180, or 180c, this system extension is placed in the Control Panels folder by the installer to provide error-free MIDI communication on the modem and printer ports. Without it, you might have trouble using Mark of the Unicorn software.
Performer Help	Leave this file in the Performer folder. It contains all of the information provided by Performer's on-line help feature.
Performer Fonts	This font suitcase contains several fonts required by Performer, and they are placed in your System by the installer. The fonts are: QuickScribe, PerfPrintGeneva 9, and PerfPrintIcons 12.

Authorizing your hard disk

Performer requires you to authorize your hard disk. Authorizing allows the program to run without asking you to insert the master disk. Otherwise, the program will ask you to insert the master disk each time you run it, briefly scanning the disk before opening.

In some situations, you may not want to authorize. For example, you may be working at a temporary location. If you don't want to authorize, do not double-click the Authorizer. Instead, see "Running programs without authorizing" on page 38.

To authorize a hard disk:

1. **If the master disk is not currently in a disk drive, insert it now.**

2. **Double-click the Authorizer/Deauthorizer on the master disk to authorize your hard disk.**

3. **Follow the directions that appear on the screen.**

   If you have more than one hard disk, be sure to authorize the disk from which you will be running the program.

Mark of the Unicorn programs do not authorize one another. For example, if you authorize your hard disk for Performer, and you have Unisyn, you need to authorize the hard disk for Unisyn using the Unisyn master disk.

What next?

The rest of this chapter tells you several things you should know about authorizing and deauthorizing. After you complete this chapter, proceed to the next one, chapter 5, "Getting Started With FreeMIDI ™". It has important information about setting up your FreeMIDI configuration, which is essential for all Mark of the Unicorn MIDI software products.

About authorizing

Once you have authorized your hard disk as described earlier, the program will run without asking for the key disk. Because the authorization is not specific to one copy of the program, you can even make several copies of the program on the hard disk, including updated versions. Likewise, you can drag a copy of the program to the trash without losing the hard disk authorization.

A master disk can authorize one hard disk. Mark of the Unicorn provides a second, identical back-up master disk free of charge when you mail in your signed registration card. This backup disk should be stored in a safe place and only used if the original master disk authorization somehow becomes damaged.

Deauthorizing a hard disk

If needed, you can deauthorize the hard disk for any reason, such as to reformat the disk, switch to a different hard disk, etc. To deauthorize a hard disk, insert the original master disk, open the disk, and double-click the Authorizer/Deauthorizer. From there, just follow the instructions provided on the screen and click the Deauthorize button when it is presented to you.

☛ If the Deauthorize button is greyed out (can't be clicked), you are not using the master disk that you originally used to authorize. Quit and check your other master disk using this same procedure.

Deauthorize before reformatting a hard disk

If you reformat an authorized hard disk, it loses its authorization. Therefore, always deauthorize an authorized hard disk before you reformat it. After reformatting, you can authorize it again.

Handling hard disk emergencies

If your hard disk fails before you have an opportunity to deauthorize it, use your backup master disk to authorize a new, repaired, or reformatted hard disk. (Disk authorizations cannot be restored from hard disk backups.) Contact Mark of the Unicorn technical support for information about getting a replacement authorization. Telephone: (617) 576-3066. Fax: (617) 576-3609.

Running programs without authorizing

If you would like to install and run a program without authorizing the hard disk, do not run the Authorizer/Deauthorizer on the master disk. Instead, launch the copy of the program on your hard disk. Insert the master disk when it asks you to do so. At the first window you see, click Continue instead of Authorize. The master disk will be scanned briefly, and the program will open without authorizing the hard disk.

About the authorization procedure

Mark of the Unicorn's installation/authorization process is different from past installation procedures.

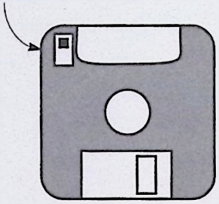
- It authorizes the entire hard disk rather than a specific copy of the program.
- Once a hard disk is authorized, any copy of the program will run without the master disk, including updates. In fact, you can have two or more copies of the program on the same authorized hard disk and all copies will run without asking for the master disk.
- Updating is much easier: you drag the update onto the hard disk as you would drag any file.
- Authorization is *not* lost by dragging the program icon into the trash. (The hard disk remains authorized even when there is no copy of the program present.)

Taking care of your master disks

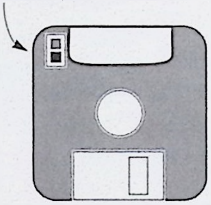
The master disk for authorized programs like Performer is crucial, as is the backup key disk that you receive in return for your registration card. Without one or the other, you cannot install and use the program. Treat them with care, and store them in a safe place when you are not using them!

> ☛ Rule of thumb: always keep your original disks locked. The only exception is that you need to unlock the master disk briefly during the process of authorizing and deauthorizing your hard disk. At all other times, we strongly recommend locking all original disks.

Locked (Hole is open)



Unlocked (Hole is covered)



Chapter 5 Getting Started With FreeMIDI™

Introducing FreeMIDI

FreeMIDI is a Macintosh system extension that is automatically placed in your Macintosh System Folder when you install any Mark of the Unicorn software product. FreeMIDI provides many advantages for all FreeMIDI-compatible software. Here are a few of the most important features. FreeMIDI provides:

- A "virtual" studio on your Macintosh that graphically mirrors your entire MIDI hardware setup and that is shared by all FreeMIDI-compatible programs
- A simple, intuitive pop-up list of your MIDI devices whenever you need it in any FreeMIDI program
- An intuitive sound list for each one of your MIDI devices, which makes it easy for you to choose patches by name
- The ability to use several FreeMIDI-compatible programs simultaneously (for example, you can play back Performer while editing patches in Unisyn at the same time)
- The ability to start playback, stop playback, rewind and cue all FreeMIDI-compatible programs at once

This chapter is required

This chapter takes you through the initial process of creating your FreeMIDI studio configuration, which Performer requires. This chapter represents the bare minimum necessary to get MIDI input and output going. A section at the end tells you where to go for further information about FreeMIDI.

Are you in a hurry?

If you are in a hurry, see "For MIDI Experts: Setup overview and quick-start guide" on page 42.

You can skip this chapter if…

You can skip this chapter if you already have another FreeMIDI-compatible program for which you have already created a FreeMIDI configuration and successfully achieved MIDI input and output with the Macintosh.

For MIDI Experts: Setup overview and quick-start guide

If you already have experience with the Macintosh, MIDI, or Mark of the Unicorn software, and you are in a hurry, this overview should give you a pretty good idea of what you need to do to make the transition to FreeMIDI. A page number is included next to each step so you can get more detailed information about that step.

To install FreeMIDI:

1. **Set up your MIDI gear. (page 43)**

   Make sure that your MIDI gear is connected and turned on, including your MIDI interface.

2. **If you use OMS, decide if you want to use FreeMIDI instead, and, if so, install the OMS emulator as described in "Emulating OMS" on page 176.**

   FreeMIDI can emulate the Opcode MIDI System™ (OMS), allowing you to completely remove OMS from your system if you like. If you use software that requires OMS, you have two choices:

   - you can remove OMS (by dragging the OMS system extension out of the System Folder) and install the FreeMIDI emulator. (See page 176 for details.)
   - You can use both OMS and FreeMIDI independently.

   If you aren't sure what you want to do, see "OMS Compatibility" on page 175 for more information about making this decision.

3. **If you use any program that requires MIDI Manager, install the FreeMIDI MIDI Manager driver as described in "FreeMIDI and MIDI Manager" on page 179.**

   MIDI Manager adds much complexity. Only use it if you have a program that absolutely *requires* it. Remember, if you have applications that need to run simultaneously (such as Digidesign's Sample Cell™ software), and they support FreeMIDI or OMS, you don't need MIDI Manager.

4. **Run FreeMIDI Setup. (page 46)**

   This application is located in the FreeMIDI Applications folder.

5. **Set the FreeMIDI System Preferences to tell FreeMIDI Setup which serial ports to search for MIDI interfaces. (page 51)**

   The preferences dialog should appear automatically. If it doesn't, choose FreeMIDI Preferences from the File menu.

6. **Create your FreeMIDI Configuration by defining each device one at a time or, if possible, by defining them automatically using one of several shortcuts.**

   In a nutshell, here are the three shortcuts. Choose the one that best suits your situation:

   - Use the Auto Config button option in the Quick Setup dialog box to have FreeMIDI search for all the devices in your studio automatically. This only works for devices that are connected with both their MIDI IN and MIDI OUT. (page 51)
   - Use the Continue button in the Quick Setup dialog box to define each device by hand using pop-up menus to indicate manufacturer, model, and device ID. (page 56)
   - Use the Open command in the File menu to open an existing Performer (version 4.2 or earlier), Digital Performer (version 1.4 or earlier), or OMS (version 1.2.1 or earlier) configuration file. The Performer configuration can be loaded from any source, either a regular Performer file or a separate configuration file. (page 55)

7. **Use the Save command in the File menu to save the FreeMIDI Configuration to any location on your hard disk.**

8. **Use the *Check Connections* command in the MIDI menu to make sure that FreeMIDI is successfully sending and receiving MIDI data to and from your MIDI devices. (page 62)**

9. **Quit FreeMIDI Setup.**

   You will now be ready to use any FreeMIDI-compatible software. You do not need to keep FreeMIDI Setup open.

Setting up your MIDI equipment

Before you set up FreeMIDI, connect your MIDI hardware to the Macintosh. To so do, you will need:

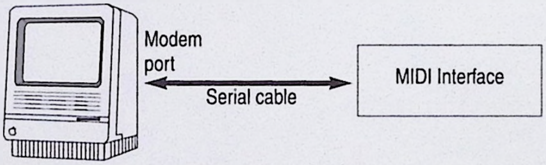
- Any standard MIDI/Macintosh interface
- At least two MIDI cables
- At least one MIDI device

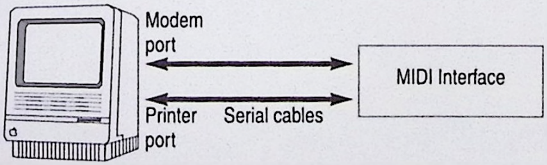
1. **Before you start, make sure the Macintosh is turned off.**
2. **Connect the MIDI interface to the Macintosh.**

   Refer to the owner's manual of the interface for specific directions. FreeMIDI can send and receive MIDI information through *both* the modem and printer serial ports on the back of the Macintosh. If your interface connects to only one, and the owner's manual does not specify which port to use, connect it to the modem port. If you have a MIDI Time Piece II or a MIDI Express interface, connect it to the modem port. You can also connect two separate interfaces, one to each port, or a single interface that attaches to both.

Printer port icon

Modem port icon





3. **Connect your MIDI device(s) to the interface as shown in one of the following diagrams.**

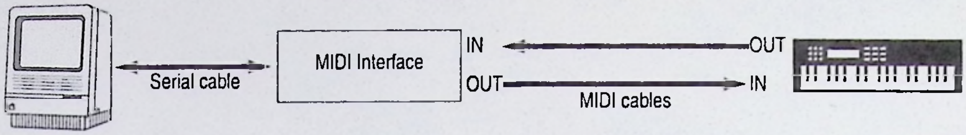

Serial cable
MIDI Interface
IN
OUT
OUT
IN
MIDI cables

Figure 5-1: Connecting a single MIDI device. Connect the device's MIDI OUT and MIDI IN ports to the MIDI interface as shown here.

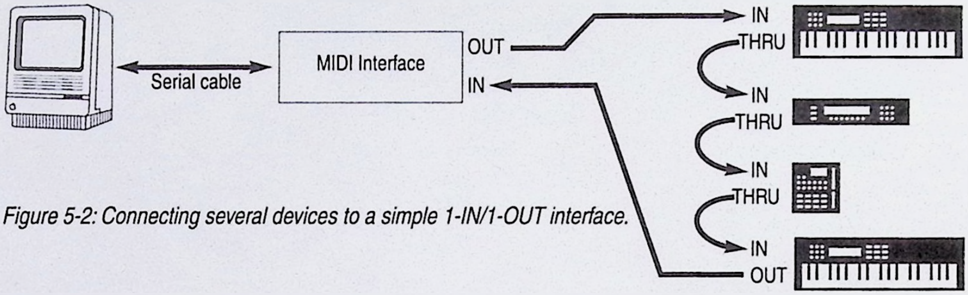

Serial cable
MIDI Interface
OUT
IN
IN
THRU
IN
THRU
IN
THRU
IN
OUT

Figure 5-2: Connecting several devices to a simple 1-IN/1-OUT interface.

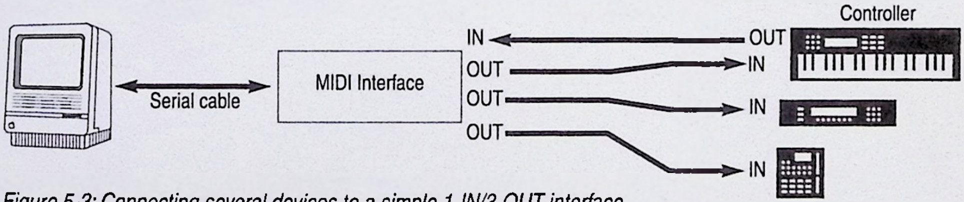

Controller
Serial cable
MIDI Interface
IN
OUT
OUT
OUT
OUT
IN
IN
IN

Figure 5-3: Connecting several devices to a simple 1-IN/3-OUT interface.

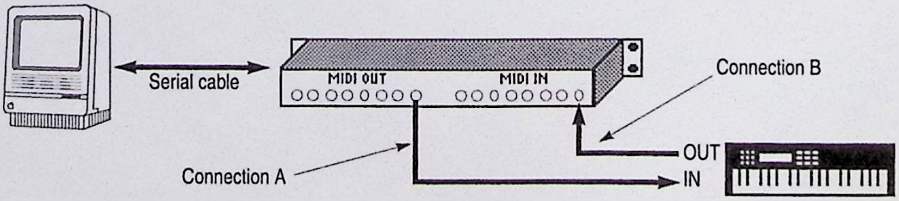

Serial cable
MIDI OUT
MIDI IN
Connection B
Connection A
OUT
IN

Figure 5-4: Connecting several MIDI devices to a multi-port interface such as the MIDI Time Piece II.

Setting up FreeMIDI

Installing FreeMIDI

Once your MIDI hardware is connected to the computer, you are ready to begin setting up FreeMIDI.

FreeMIDI is automatically installed in your System Folder when you install Performer as described in the previous chapter.

OMS compatibility

If you currently use the Opcode MIDI System (OMS) and it is required for OMS applications that are not yet FreeMIDI-compatible, you can use FreeMIDI to emulate OMS. We recommend that you proceed now to Appendix A, "Using FreeMIDI with OMS" in this booklet for information on enabling FreeMIDI's OMS emulation. After enabling OMS Emulation, please return to this page to continue your FreeMIDI configuration session.

FreeMIDI Setup can read OMS configuration files created by OMS 1.2 and 1.21 and translate them into FreeMIDI configurations. Please read on for more information on this feature.

MIDI Manager compatibility

If you need to use applications that require MIDI Manager and do not yet support FreeMIDI, we recommend that you proceed now to "FreeMIDI and MIDI Manager" on page 179 for information on installing the FreeMIDI MM Driver for MIDI Manager. After installation the FreeMIDI MM Driver, please return to this page to continue your FreeMIDI configuration session.

What is a FreeMIDI configuration?

A *FreeMIDI configuration* is a file that you create and save on your hard disk using a program called *FreeMIDI Setup.* The file contains a graphical representation of the MIDI hardware devices in your studio, and it shares this list of devices with all FreeMIDI applications.

Here is an overview of the process we will go through in this chapter to create it:

1. Run FreeMIDI Setup.
2. Set the FreeMIDI System Preferences to tell FreeMIDI Setup which serial ports to search for MIDI interfaces.
3. Create your FreeMIDI Configuration by defining each device one at a time or, if possible, by defining them automatically using one of several shortcuts.
4. Save the FreeMIDI Configuration to disk.

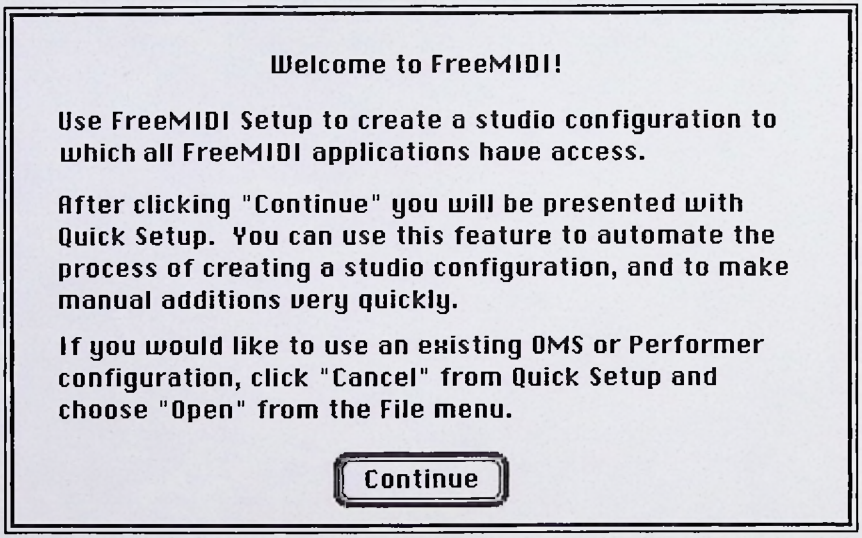
5. Use a feature called *Check Connections* to make sure that FreeMIDI is successfully sending and receiving MIDI data to and from your MIDI devices.

Launching FreeMIDI Setup

Locate the FreeMIDI Setup program. During installation, it is placed in the FreeMIDI Applications folder on the top level of your hard disk.

1. **Double-click the FreeMIDI Setup application icon to launch the program.**

   After the initial splash screen, the *Welcome to FreeMIDI* dialog box appears:



Welcome to FreeMIDI!

Use FreeMIDI Setup to create a studio configuration to which all FreeMIDI applications have access.

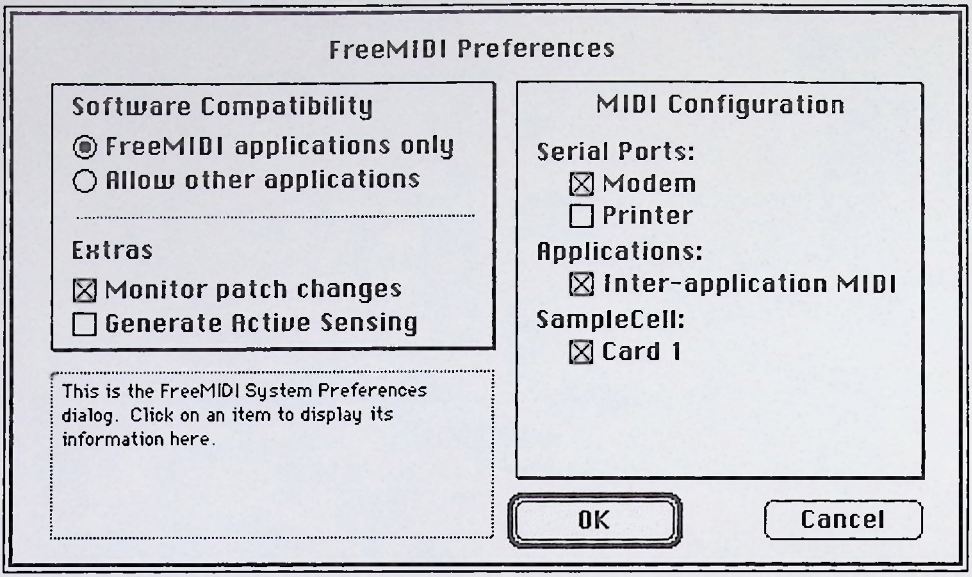
After clicking "Continue" you will be presented with Quick Setup. You can use this feature to automate the process of creating a studio configuration, and to make manual additions very quickly.

If you would like to use an existing OMS or Performer configuration, click "Cancel" from Quick Setup and choose "Open" from the File menu.

Figure 5-5: Welcome to FreeMIDI Dialog Box

2. **Click Continue.**

   The FreeMIDI Preferences dialog box appears.



FreeMIDI Preferences

Software Compatibility

● FreeMIDI applications only
○ Allow other applications

Extras

☒ Monitor patch changes
☐ Generate Active Sensing

This is the FreeMIDI System Preferences dialog. Click on an item to display its information here.

MIDI Configuration

Serial Ports:
☒ Modem
☐ Printer

Applications:
☒ Inter-application MIDI

SampleCell:
☒ Card 1

Figure 5-6: FreeMIDI Preferences Dialog Box.

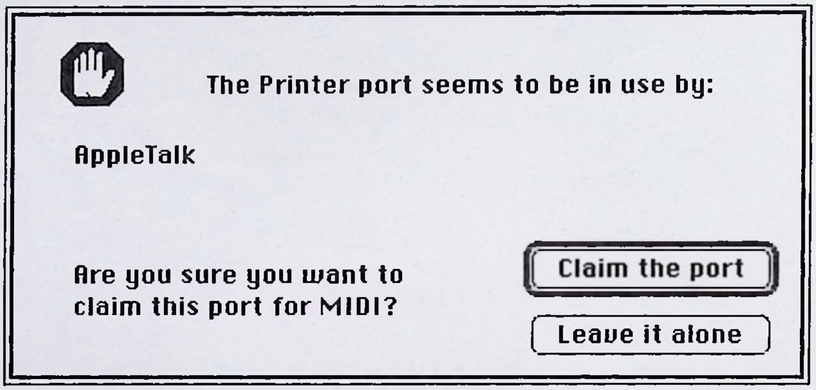
3. Set the FreeMIDI Preferences as described below.

Preference	How you should set it
Software compatibility	Choose the *FreeMIDI Applications only* option, unless you want to run other non-FreeMIDI software at the same time as FreeStyle. If so, use the *Allow other applications* option. This option may also be necessary if you have FAX/modem, networking, or other communication software that requires access to the modem or printer port while FreeMIDI applications are running.
MIDI Configuration	Click the check box for each serial port (modem and printer) to which you have a MIDI interface connected. Be sure your MIDI gear is turned on.
Inter-application MIDI	Leave this option unchecked, unless you have another FreeMIDI program that requires that it be checked.
Sample Cell	If you have a Digidesign Sample Cell or Sample Cell II card installed in your Macintosh, check its box.
Monitor patch changes	Make sure this option is checked.
Generate active sensing	Leave this option unchecked, unless you have a MIDI device in your studio that does not function correctly unless it receives Active Sensing data at all times. In our experience, the only MIDI devices that are in this category are some Yamaha Clavinova-series electric pianos.

4. **Before you click OK in the Preferences dialog box, check to be sure that your MIDI interfaces are connected and powered-up.**

5. **Click OK to confirm your preference settings.**

   When you click OK, FreeMIDI Setup scans the serial port(s) that you have selected for MIDI interfaces. If you selected the printer port option under MIDI Configuration, and AppleTalk is enabled on the printer port, a warning alert box appears to ask if you would like to claim the printer port for MIDI.



The Printer port seems to be in use by:

AppleTalk

Are you sure you want to claim this port for MIDI?

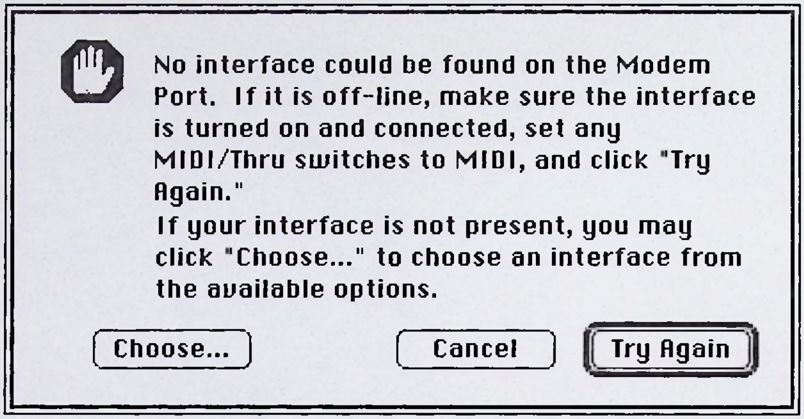
Figure 5-7: AppleTalk Warning Alert

6. **If you are using AppleTalk for network communications or an AppleTalk printer, you should click *Leave it alone* and re-think your MIDI studio setup.**

   Otherwise, click *Claim the port* and FreeMIDI will be able to use the printer port for MIDI. If you do so, remember to disable AppleTalk in the Chooser when you are through configuring FreeMIDI in order to avoid seeing this warning alert again. If you are using AppleTalk for an Ethernet network and your Ethernet connection is made via NuBus or SCSI or some other bus that does not utilize the printer port, FreeMIDI should not ask about disabling AppleTalk and network communications should not be interrupted.

7. **If there are interfaces in your setup that are not powered on or connected properly, FreeMIDI Setup cannot find them.**

   If FreeMIDI cannot find any interfaces, the No Interface Found dialog appears:



No interface could be found on the Modem Port. If it is off-line, make sure the interface is turned on and connected, set any MIDI/Thru switches to MIDI, and click "Try Again."
If your interface is not present, you may click "Choose..." to choose an interface from the available options.

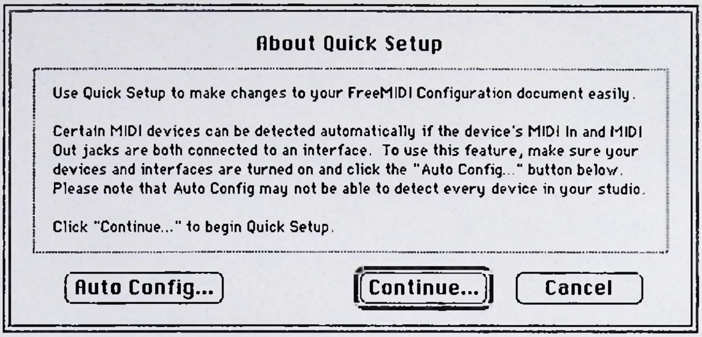
Figure 5-8: No interface Found Dialog Box

8. **Check the connections and power switches and any MIDI/Thru switches on your interfaces and click Try Again.**

   If your interfaces are not currently connected or not powered on, you can still create a FreeMIDI configuration at this time, but you will need to use the Update Interfaces feature. For more information, see “Adding Interfaces” on page 701 in the Performer Reference Manual. If FreeMIDI Setup cannot find some or all of your interfaces and you believe that they are connected properly and are powered on, proceed to Appendix C, “Troubleshooting FreeMIDI”.

Setting up your FreeMIDI configuration

After finding all the connected MIDI interfaces in your MIDI studio, the About Quick Setup dialog box appears:



About Quick Setup

Use Quick Setup to make changes to your FreeMIDI Configuration document easily.

Certain MIDI devices can be detected automatically if the device's MIDI In and MIDI Out jacks are both connected to an interface. To use this feature, make sure your devices and interfaces are turned on and click the "Auto Config..." button below. Please note that Auto Config may not be able to detect every device in your studio.

Click "Continue..." to begin Quick Setup.

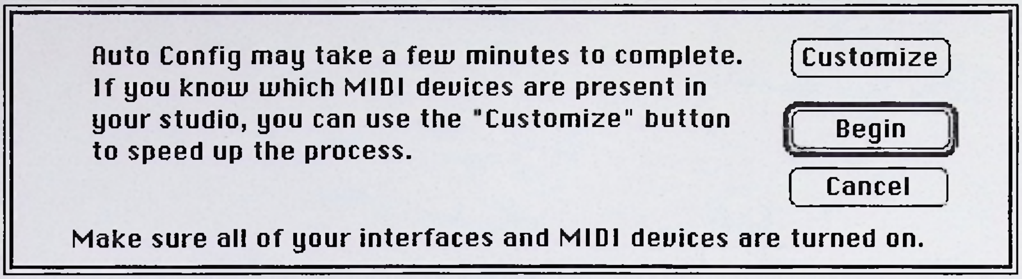
Figure 5-9:About Quick Setup Dialog Box

At this point, the step you take next depends on the method for configuring FreeMIDI that you wish to use. There are three methods for configuring your MIDI studio:

Configuration method:	**Explanation:**	**What you should do:**
Automatic configuration	FreeMIDI automatically scans the MIDI devices connected to your interface and includes them in your FreeMIDI configuration file.	Click the Auto Config button and proceed to "Configuring Your studio automatically" on page 51.
Manual Configuration	You indicate each MIDI device that you have from a pop-up menu and make a few settings for each device.	Click the Continue button and proceed to "Adding devices manually with Quick Setup" on page 56 in this chapter.
Translating an existing configuration file	You open an existing configuration file from Performer, Digital Performer, or OMS, and your FreeMIDI configuration is set up to match it as closely as possible.	Click Cancel and proceed to "Translating Performer, Digital Performer, or OMS files" on page 55 in this chapter. This method can save you time if you have such an existing file and you have a large MIDI studio.

Configuring Your studio automatically

If you clicked *Auto Config*...in the About Quick Setup dialog box, the Auto Config dialog box appears:



Auto Config may take a few minutes to complete. If you know which MIDI devices are present in your studio, you can use the "Customize" button to speed up the process.

Make sure all of your interfaces and MIDI devices are turned on.

Figure 5-10: Auto Config Dialog Box

Deciding whether to customize before you begin

It takes time for Auto Config to scan for each of the hundreds of possible MIDI instruments that FreeMIDI knows about. Auto Config will take several minutes—more if you have one or more multi-port interfaces with lots of MIDI ports on them.

If you want, you can customize Auto Config to search only for the instruments you have in your studio. This makes the whole process much faster. If you are not sure which MIDI devices are in your studio, or if you do not wish to spend time customizing Auto Config, click *Begin* and FreeMIDI will start searching your studio for MIDI devices. If you do know what devices you have in your studio, proceed now to “Customizing Auto Config” on page 54.

How Auto Config works

Auto Config scans your MIDI interface(s) and tries to detect each MIDI device automatically. (For those of you who know a little bit about MIDI, this is accomplished with system exclusive messages that are unique to each instrument.) Auto Config can detect most MIDI keyboards, sound modules, and similar devices, although it can't detect *every* MIDI device ever created. As a result, it will find most—and hopefully all—of your devices, depending on which ones you have. Later, you can add the ones it misses.

As you can see, FreeMIDI needs to be able to send MIDI data to the device, and it needs to be able to receive data back. As a result, before you proceed, be sure that all your MIDI gear is turned on and connected to your MIDI interface(s) properly. For Auto Config to find your MIDI devices, they need to have both their MIDI inputs and outputs connected to your interfaces. If you know how to do so, enable system exclusive transmit and receive on any MIDI devices that have such a setting. If you do not know how to do this, don't worry. Many devices do not even have a setting for this function.

Initiating the Auto Config process

After you click Begin, FreeMIDI checks every cable on all of your MIDI interfaces for MIDI devices. The piano keyboard progress bar gradually fills up as FreeMIDI searches your studio for MIDI devices as shown in Figure 5-10 on page 51.

As FreeMIDI finds MIDI devices, it lists them in the status box below the piano keyboard. If you have the *FreeMIDI Applications only* option set in the FreeMIDI preferences, you can even switch out of FreeMIDI Setup to another application and FreeMIDI will continue searching your studio for MIDI devices while you do other work on your Macintosh! If you have the *Allow other applications* option set in the FreeMIDI Preferences, you can still switch to another application during the Auto Config procedure, but FreeMIDI will stop searching for MIDI devices until you switch back into the FreeMIDI Setup application.

This search can take several minutes depending on the number of MIDI devices and the type and number of MIDI interfaces in your studio. Click *Stop* if you want to interrupt the search process at any time and Auto Config will stop searching for MIDI devices. The Quick Setup dialog box opens and displays all the devices found up to that point.

Keep in mind that Auto Config may not be able to find *all* the MIDI devices in your studio. It is also possible that one MIDI device from a manufacturer could not be distinguished from another, closely related MIDI device from the same manufacturer. An example of this

A few things that can happen during Auto Config

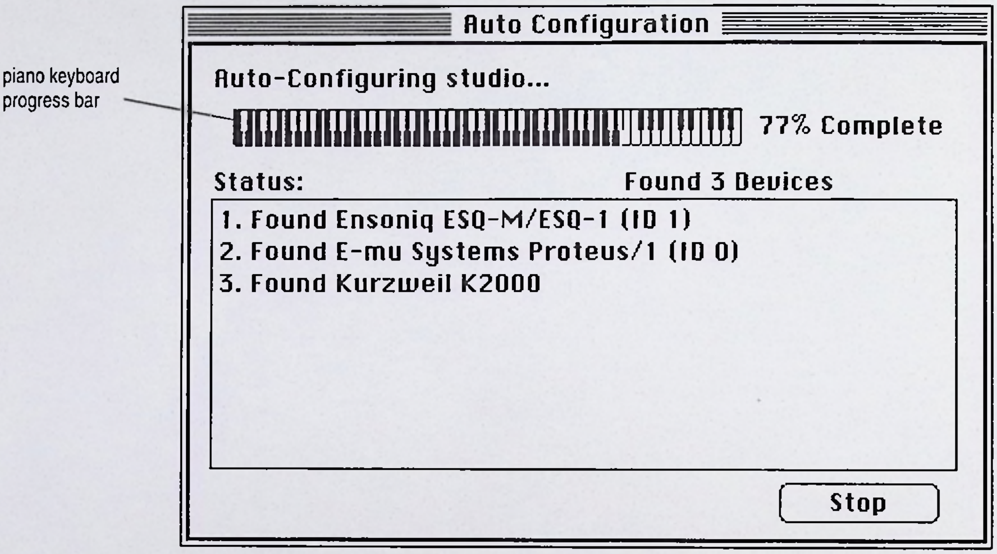
If you have a MIDI device that echoes (merges) incoming MIDI data to its MIDI out, this may cause errors during the Auto Config process. For best results, we recommend disabling this feature. Unfortunately, in some MIDI devices, echoing cannot be disabled. If this is the case, we recommend powering off these units until Auto Config is complete. You can then power them back up and add them to your FreeMIDI configuration manually. Some examples of such devices are the Yamaha KX-88 and Roland SBX-80.

Due to their MIDI implementation, some MIDI devices may display "MIDI Buffer Full", "MIDI Overflow error" or "device ID number mismatch" error messages in their front-panel display during Auto Config. This is due to the large number of sysex messages that are sent to each device. Don't worry. This is harmless. (Hopefully, more and more manufacturers will support the universal MIDI device inquiry message, which will prevent messages like these.)

Some MIDI devices may be found more than once because they are able to respond to more than once device ID at a time. If possible, try to set these devices to a single ID before using Auto Config.

is the Korg M1 family, which consists of the M1, M1R, M1EX, and M1REX. Auto Config will probably find all of these units and identify them all as Korg M1s.

To fine-tune and finalize your configuration, proceed to "Adding devices manually with Quick Setup" on page 56.


piano keyboard progress bar
Auto Configuration
Stop

Auto-Configuring studio...

77% Complete

Status: Found 3 Devices

1. Found Ensoniq ESQ-M/ESQ-1 (ID 1)
2. Found E-mu Systems Proteus/1 (ID 0)
3. Found Kurzweil K2000

Figure 5-11: Auto Config Progress Window

Customizing Auto Config

If you know which MIDI devices are in your studio, click *Customize...* so that you can tell FreeMIDI what devices to search for. This can greatly reduce the amount of time it takes for Auto Config to find your MIDI devices.

1. **After clicking *Customize*, the Customize dialog box appears as shown in Figure 5-12.**

   If you change your mind and no longer want to customize Auto Config, but you still want FreeMIDI to search for MIDI devices and configure your studio automatically, click *Simplify* to return to the Auto Config dialog box and proceed to "Initiating the Auto Config process" on page 52.

2. **Select a device or devices from the list on the left and click *Add*.**

   To select more than one device, command-click each device that you wish to add. Shift-drag to select multiple devices that are together in the list. To select all the devices from the list at once, click *Add All*.

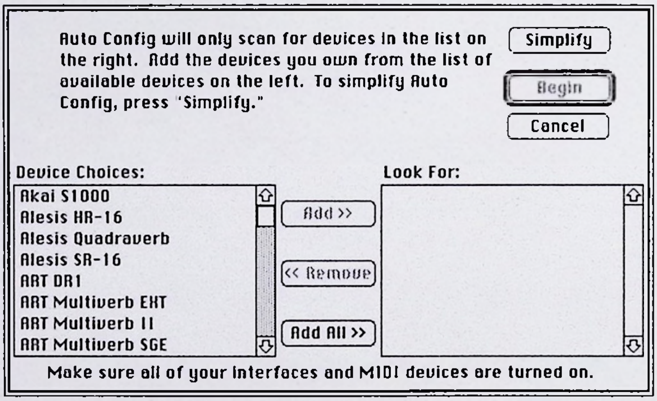
3. **If you accidentally add a device or some devices for which you do not want FreeMIDI to search, select the device or devices from the list on the right and click *Remove*.**

4. **Keep adding devices until you have told FreeMIDI about all the devices in your studio that are in the list.**

5. **When you are done, click *Begin*.**

   FreeMIDI proceeds to check every cable of all of your MIDI interfaces for all the MIDI devices you have defined. You'll see the progress dialog box shown in Figure 5-10 on page 51.

6. **Proceed to "Initiating the Auto Config process" on page 52.**



Auto Config will only scan for devices in the list on the right. Add the devices you own from the list of available devices on the left. To simplify Auto Config, press "Simplify."

Make sure all of your interfaces and MIDI devices are turned on.

Figure 5-12: Auto Config Customize Dialog Box

Translating Performer, Digital Performer, or OMS files

FreeMIDI Setup can open configuration files created by Performer 4.2, Digital Performer 1.4, or OMS Setup 1.2 or 1.21 and create a FreeMIDI configuration that closely matches this configuration. This can save a considerable amount of setup time. When translating Performer and Digital Performer configurations, you can open either a regular Performer/Digital Performer file or the configuration file, which may be saved separately.

To translate any of these files:

1. **Choose Open from the File menu. Alternately, you can type command-O on your Mac keyboard.**

   A standard Macintosh File Open dialog box opens.

2. **Select the Performer, Digital Performer, or OMS Setup file that you wish to translate and click Open.**

   Use the directory pop-up menu to navigate to the disk and folder that contains the configuration you wish to translate. See your Macintosh owner's manual for more information on opening files and navigating to disks and folders.

3. **The selected file is translated as closely as possible into a FreeMIDI configuration.**

If, after the translation process, all of your MIDI devices now appear in the FreeMIDI Configuration window and are connected to the proper MIDI interface input and outputs, proceed to "Arranging the FreeMIDI Configuration window" on page 58 in this chapter for the next steps in the configuration process.

You may find, however, that some devices are misnamed, missing, incorrectly duplicated, or improperly defined. If so, you will need to edit the configuration using Quick Setup:

1. **Choose *Quick Setup* from the Configuration menu and click Continue.**

   The About Quick Setup dialog box appears.

2. **Click *Continue.***

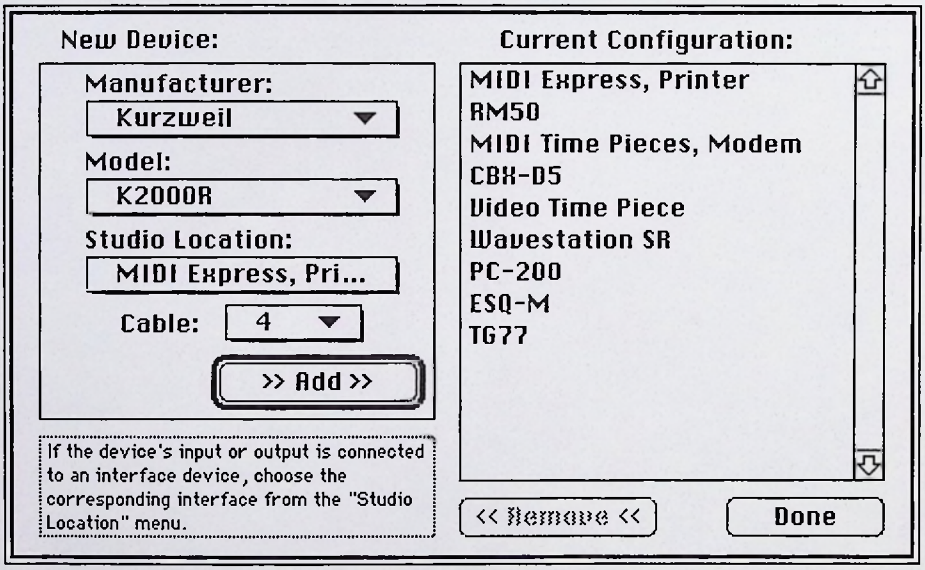
3. **Proceed to "Adding devices manually with Quick Setup" on page 56.**

Adding devices manually with Quick Setup

At this point, you have completed one of the following:

- You have just completed the Auto Config process (the search is 100% complete).
- You have just translated a Performer, Digital Performer, or OMS file and have skipped to this step.
- You have just clicked the Quick Setup button to configure your studio manually.

In any case, you now see the Quick Setup dialog box on-screen as shown below in Figure 5-10.



New Device:

Manufacturer: Kurzweil

Model: K2000R

Studio Location: MIDI Express, Pri...

Cable: 4

If the device's input or output is connected to an interface device, choose the corresponding interface from the "Studio Location" menu.

Current Configuration:

MIDI Express, Printer
RM50
MIDI Time Pieces, Modem
CBX-D5
Video Time Piece
Wavestation SR
PC-200
ESQ-M
TG77

Figure 5-13: Quick Setup Dialog Box

If all the MIDI devices in your studio already appear in the list, you are done! Click *Done* and the FreeMIDI Configuration window will appear containing all your MIDI devices and their connections. If there are no devices listed, or the list is incomplete, you will now need to tell FreeMIDI about these devices manually as follows:

1. **Select the correct manufacturer, model, studio location and cable (if applicable) from the pop-up menus on the left and then click *Add Device.***

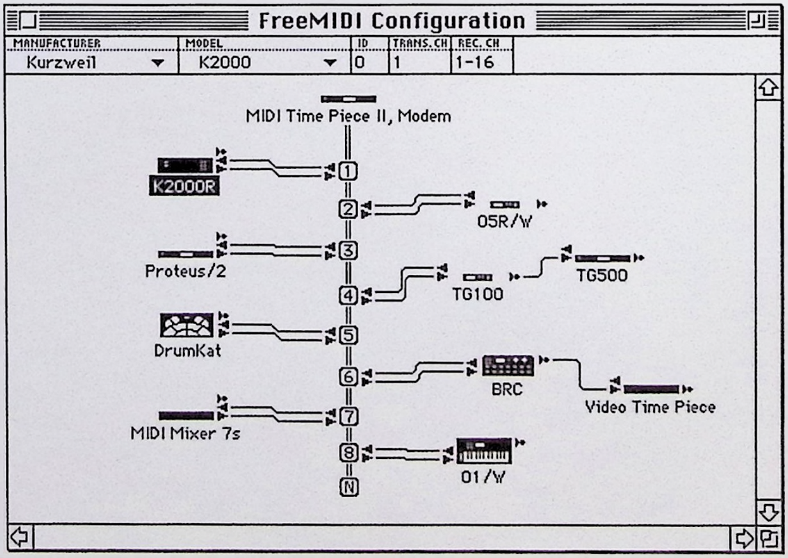
   If the pop-up menus do not contain a description of a particular device, choose *Other* and click *Add Device*. The first generic device you add is given the name *Device-1*. You will learn how to re-name and re-define these devices later on.

2. **If Auto Config found devices that are not the exact model installed in your studio, such as a Korg M1 instead of a Korg M1R, you can easily edit these devices.**

   Select the device on the right and click Remove. Now choose a new model from the pop-up menu on the right and click add. A new device is added with the same manufacturer and studio location.

3. **When you have added all the devices to the list that are in your studio, click *Done.***

   The FreeMIDI Configuration window appears, displaying all of your MIDI devices and their connections.


FreeMIDI Configuration
MIDI Time Piece II, Modem
K2000R
1
2
05R/W
Proteus/2
3
4
TG100
TG500
DrumKat
5
6
BRC
Video Time Piece
MIDI Mixer 7s
7
8
01/W
N

MANUFACTURER	MODEL	ID	TRANS. CH	REC. CH
Kurzweil	K2000	0	1	1-16

Figure 5-14: FreeMIDI Configuration Window

The Clean Up Window Command

You can use the Clean Up Window command in the Views menu to quickly arrange all the devices in the window into uniform columns.

Arranging the FreeMIDI Configuration window

You can arrange the FreeMIDI Configuration window any way you like. We suggest that you drag device icons so that they appear as they do in your studio. For instance, you can arrange all the modules to the left of your Mac on the left side of the window and do the opposite for the modules to the right of your Mac. You can drag the patch cords, which connect the devices to the interfaces, up or down so that you can view the connections clearly. You can drag MIDI ports in a multi-cable interface, such as the MTP, MTP II or MIDI Express, up or down to create more or less space between them. You can delete input or output cables, which are not part of your studio setup, by clicking the patch cord to select it and typing the backspace or delete key on your Mac keyboard. You can also make and break connections by just dragging the ends of the patch cords. You can use the different options in the Views menu to change the size of the icons and to view input and outputs separately, together, or only when the device to which they are connected is selected.

Making MIDI thru connections

When more than one MIDI device shares a single output port from a MIDI interface, you need to connect the MIDI Thru port of the device to the input of the other device. This mirrors the physical connection that you should have between the devices.

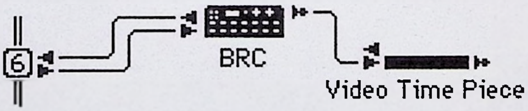
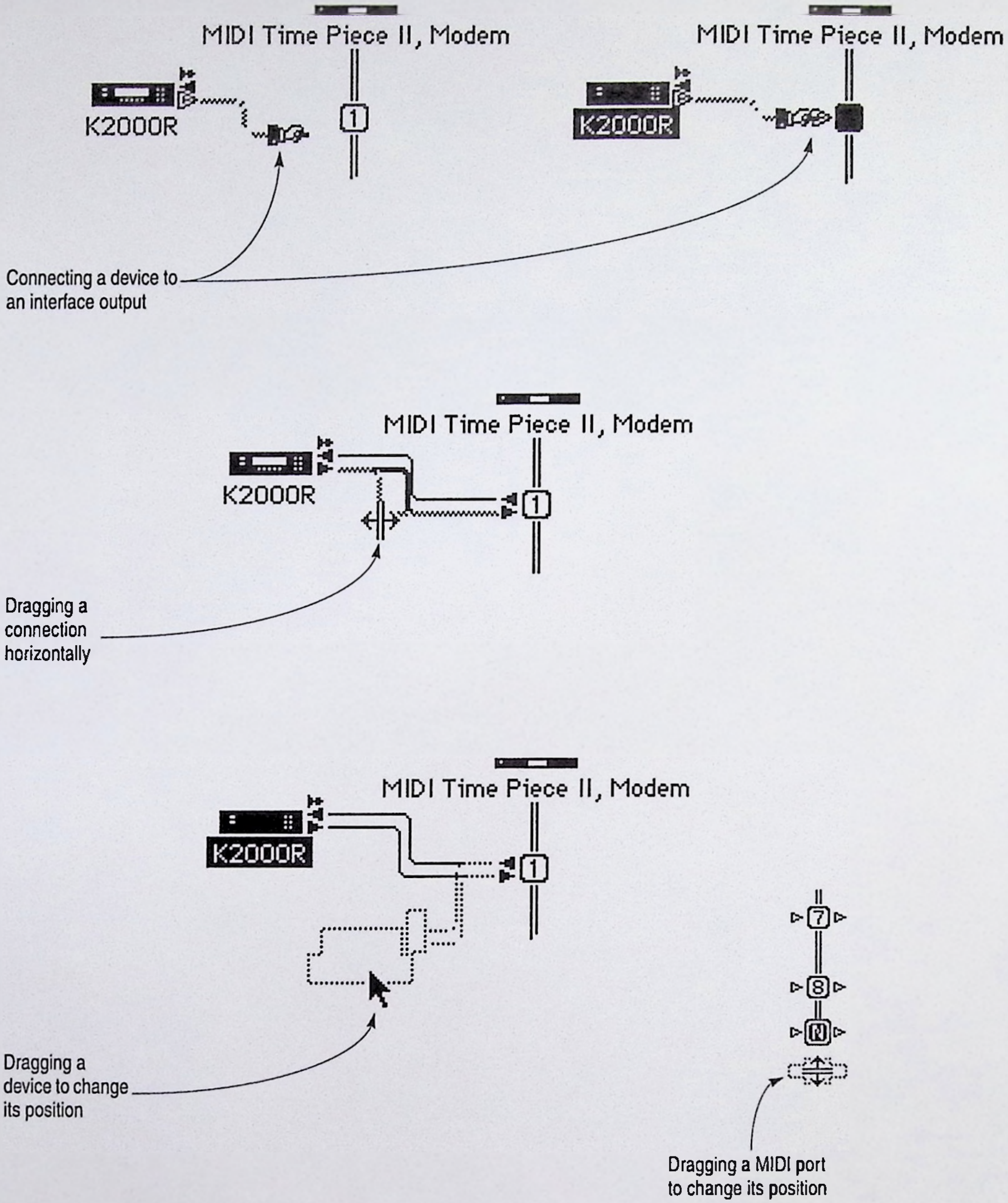


Figure 5-15:MIDI Thru Connection

Making multiple MIDI input connections

FreeMIDI Setup allows you to connect more than one MIDI output from a device to a single MIDI input on an interface. When you make such a connection, you are telling FreeMIDI that both devices' MIDI outputs are connected to a single MIDI input on an interface. Without some type of MIDI merger, this type of connection is not possible.


MIDI Time Piece II, Modem
K2000R
1
MIDI Time Piece II, Modem
K2000R
MIDI Time Piece II, Modem
K2000R
1
MIDI Time Piece II, Modem
K2000R
1
7
8
N

Connecting a device to an interface output

Dragging a connection horizontally

Dragging a device to change its position

Dragging a MIDI port to change its position

Figure 5-16: Arranging FreeMIDI devices and connections

Connecting devices to other devices

FreeMIDI Setup allows one connection per port (input output, or thru) on each device. You cannot connect devices to each other except from MIDI Thru to MIDI In of a separate device. If you would like to make such connections, use the Cable Routing (on MIDI Time Piece and MIDI Express interfaces) or similar features in your MIDI interface or MIDI patch bay/merger gear.

Using MidiLocate to make connections

MidiLocate is a unique feature designed to make adding devices to your FreeMIDI configuration easier. In this mode, FreeMIDI automatically determines the proper input cable to which a device is physically attached and then displays this connection in the FreeMIDI Configuration window.

MidiLocate is a checkable menu item. This means that its state (on or off) is toggled each time you choose it from the menu. When there is a check next to the MidiLocate menu item in the MIDI menu, MidiLocate is enabled.

To use MidiLocate:

1. **Select a FreeMIDI device in the FreeMIDI Configuration window.**

2. **Check to be sure that MidiLocate menu item in the MIDI menu is enabled.**

   The MidiLocate command should have a check next to its name. If it does not, choose it to select it. You can also use the Mac keyboard shortcut to toggle the state of MidiLocate by typing command-L.

3. **Play some MIDI data from the MIDI device.**

   FreeMIDI will determine from where the MIDI data is coming and redraw the FreeMIDI Configuration window to indicate the appropriate connection.

Here is an example of MidiLocate in action. Let's say you have a Kurzweil K2000 that is connected to some MIDI input on your MTP II, but you are not sure which input:

1. **Add a K2000 FreeMIDI device your configuration using *Quick Setup* or *Create Device.***

2. **Enable MidiLocate.**

3. **Select the K2000 device by clicking its icon.**
4. **Play some notes on its keyboard or send some other MIDI data from it and the K2000 device automatically is connected to the correct MIDI input port on your MTP II in the FreeMIDI Configuration window.**

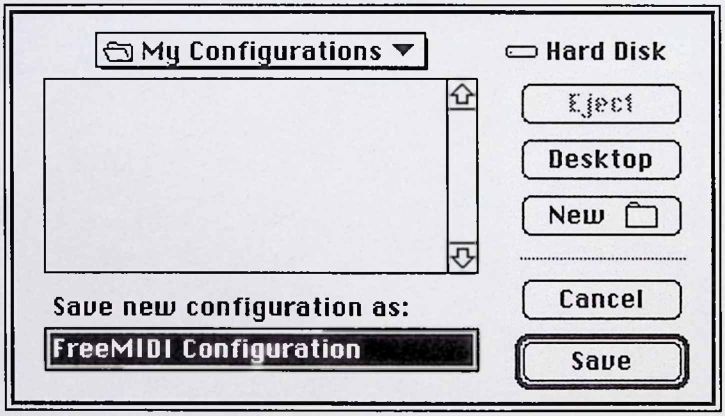
Saving the FreeMIDI Configuration

Once you have a FreeMIDI configuration, it is a good idea to save it to disk so that you will not have to configure FreeMIDI for your studio again.

To save your configuration:

1. **Choose Save from the File menu. Alternately, you can type command-S on your Mac keyboard.**

   A standard Macintosh File Save dialog box opens.



Save new configuration as:
FreeMIDI Configuration

Figure 5-17: Macintosh File Save dialog box

2. **Use the suggested name "FreeMIDI Configuration" or enter another name for your configuration, if you like, and click *Save* or click *Cancel* to cancel the operation.**

   Use the directory pop-up menu to navigate to a disk and folder in which you wish to save this configuration.

   ☛ If you are using System 7, you can use the New Folder button to create a new folder in which to save this configuration and others that you might create in the future. See your Macintosh owner's manual for more information on saving files and navigating to disk and folders.

The current FreeMIDI Configuration

There is no need to make this configuration "current". Whichever configuration is visible in the FreeMIDI Configuration window is the current configuration that all FreeMIDI applications will use. Whenever you launch FreeMIDI Setup to view or edit your FreeMIDI configuration, the configuration document with which you were last working is opened automatically.

Testing for MIDI input and output

You are almost done setting up your FreeMIDI configuration. The last thing you need to do is test the MIDI connections between your MIDI devices and FreeMIDI. To test for MIDI input and output:

1. **Choose *Check Connections* from the MIDI menu.**

   This command puts FreeMIDI Setup in a special studio testing mode which allows you to easily test MIDI inputs and outputs. When the menu item is checked, Check Connections mode is enabled and the mouse cursor will change to the Check Connections cursor as shown in Figure 5-10 below.

Figure 5-18: Check Connections mouse cursor

2. **Check MIDI input by playing notes on your MIDI controllers or sending other MIDI data such as patch changes, controller data or system exclusive data from your other MIDI modules.**

   When FreeMIDI is receiving MIDI correctly in Check Connections mode, the MIDI port to which the MIDI device sending the MIDI data is connected will flash the eighth note symbol as shown in Figure 5-10 below. If no activity is indicated, check to be sure that the MIDI device that is sending the data has its MIDI output connected to the proper MIDI input on your MIDI interface.

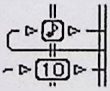


Figure 5-19: Incoming MIDI Data indicator

3. **Check MIDI output by clicking devices.**

   In Check Connections mode, FreeMIDI Setup generates a C major chord on the default play channel and sends it to the MIDI output to which the device you click is connected. If all is well, this device should play a C major chord. If the MIDI device does not play notes, check to be sure that the MIDI device has its MIDI input connected to a MIDI output on your MIDI interface.

Quitting FreeMIDI Setup

If your connections check out OK, you are finished! You are now ready to use any FreeMIDI-compatible software. All of your FreeMIDI configuration devices will appear in any places where you choose MIDI devices for playback and recording (input and output).

You do not need keep FreeMIDI Setup open. The only time you need to open FreeMIDI Setup is when you would like to make changes to your FreeMIDI studio configuration. Conversely, you can open FreeMIDI Setup at any time, even while you have other FreeMIDI-compatible programs open.

Where to go next

Regardless of your level of experience, turn now to chapter 6, “Starting Performer for the First Time” for some important things you need to know before you begin using Performer.

Chapter 6

Starting Performer for the First Time

Before you start up Performer for the first time, be sure that you have already completed the installation process described in the previous chapters. At this point, you should have:

- Connected your MIDI hardware to your Macintosh
- Installed Performer and FreeMIDI
- Authorized your hard disk to run Performer (if desired)
- Created your FreeMIDI configuration and tested your MIDI connections in the FreeMIDI Setup program

If you have completed the above installation procedures, you are now ready to start Performer.

To open Performer for the first time

To open Performer, double-click the Performer program icon.

The Performer program icon

☛ If you see a message informing you that Performer cannot run yet because FreeMIDI is not installed in the system or because there is no FreeMIDI configuration yet, refer to the previous chapter in this booklet to make these preparations.

☛ The examples of Performer's windows that you see in this manual are what you see when Performer is running on a Macintosh with an 8-bit color monitor (with 256 colors). If you have a black and white monitor, what appears on your screen will be slightly different than what you see printed in this book.

Where to go next

At this point, you are ready to open a file to begin working with Performer. Where you go next depends on what you would like to do.

What you want to do:	Where to go next:
If you would like a brief overview of Performer	Turn to chapter 7, "Performer Overview: A Picturebook Tour" (page 69) in this guide.
If you would like a brief, step-by-step tutorial	Turn to chapter 8, "Getting Started: Recording Your First Track" (page 87).
If you would like an extensive tutorial about how to cycle-record and build a sequence	Turn to chapter 9, "Tutorial: Building a Sequence" (page 103).
If you don't read manuals and would like to begin sequencing right away	Go for it. Before you do, though, you might want to check out chapter 7, "Performer Overview: A Picturebook Tour" (page 69).
If you would like brief overview of the most recent changes in Performer	Turn to "What's New in Performer® 5" on page 13.
If you have a MIDI Time Piece II or a MIDI Express and you are just getting started with Version 5 and FreeMIDI	Turn to chapter 10, "Using Other FreeMIDI Releases with Performer" (page 151) for information about how to run their software with FreeMIDI and Performer Version 5.
If you would like to be able to choose sounds (patches) on your MIDI synthesizer by name in Performer and other FreeMIDI-compatible programs	Turn to chapter 48, "Using PatchList Manager" (page 725) in the Reference Manual. It discusses how to load lists of sounds into FreeMIDI from your MIDI gear. If you have Unisyn, also consult chapter 44, "Using Performer With Unisyn" in the Reference Manual.
If you would like to learn more about FreeMIDI	This installation guide has told you the basic things you need to know. However, FreeMIDI provides much more. For example, you can create your own icons for your MIDI devices in the FreeMIDI configuration. As another example, you can connect Performer's transport controls (play, stop, rewind) to another FreeMIDI application, like Unisyn, so that you can control Performer from Unisyn. For more information, the see the following FreeMIDI-related chapters in the Performer User's Guide: • chapter 46, "Using FreeMIDI Setup" • chapter 47, "Quick Reference for FreeMIDI Setup" • chapter 48, "Using PatchList Manager" • chapter 49, "Editing FreeMIDI Device Files"

Part III

Tutorials

Tutorials

Chapter 7

Performer Overview: A Picturebook Tour

If you don't like to read manuals

This chapter provides a quick overview of Performer's main features. Each page gives you a brief introduction to Performer's important windows and features. You'll probably get a good idea of how to get around in the program just by scanning these pages. Once you have, you'll be primed and ready for the step-by-step tutorials that follow. Or you can try to begin sequencing on your own.

Following along in Performer

You can read this tour without actually being in front of your computer and without running Performer. If you would like, however, you can run Performer so that you can try things in the software as you read. To do so, just double-click the Performer program icon now to launch the program (if you haven't already done so). A new file appears, and at the top of the window, you'll see… (turn the page)

The Consolidated Controls panel

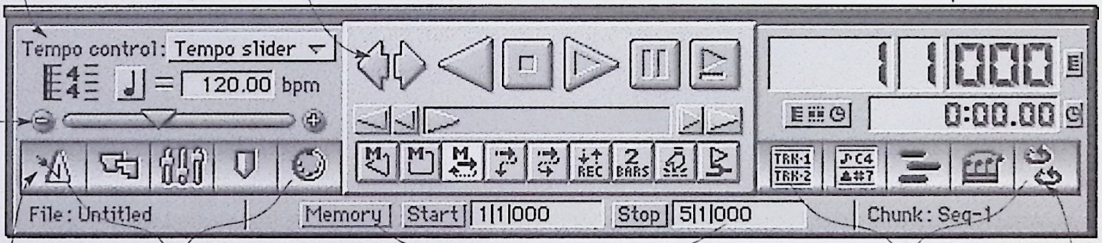
The Consolidated Controls panel provides tape-deck style transport controls, a metronome panel for tempo control, a counter, and buttons that open most of Performer's important windows. Because this panel is so central to Performer's operation, it appears whenever you open a new or existing file, and it cannot be closed.

Metronome Panel
Controls the tempo of the music. Drag the tempo slider, or type in the desired tempo in beats per minute.

Skip Buttons
You can have several—even many—sequences in one Performer file and skip between them, just like a CD player.

Transport Controls
Function just like a standard tape deck. From left to right: rewind, stop, play, pause, and record. The position bar below can be used to cue quickly anywhere in the music.

Counter
Displays the current playback time in the music in bars, beats, and ticks. There are 480 ticks per quarter note. The auxiliary counter displays one of Performer's other two time formats: real time or SMPTE time code.



Tempo control: Tempo slider

120.00 bpm

1 | 1 | 000

0:00.00

File: Untitled

Memory

Start 1|1|000

Stop 5|1|000

Chunk: Seq-1

Tempo Slider

Window Buttons
These buttons open windows for commonly used features in Performer, such as the Markers window.

Memory Bar
Displays the start and stop time of the memory-cycle playback loop. These are the locations Performer will shuttle between when Memory-cycle is turned on.

Window Buttons
These buttons open editing windows. From left to right: Tracks, Event list, Graphic Editing, and QuickScribe notation windows.

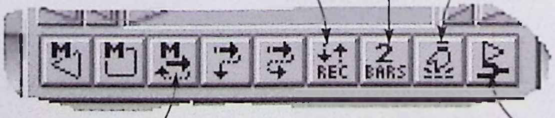
Metronome Click
Press this button to turn the metronome click on and off. Double-click it to set the click preferences.

Auto Record
Lets you automate recording punch-in and punch-out.

Countoff
Gives you a countoff before playback or recording. Double-click to set preferences.

Wait
Makes Performer wait for a MIDI event trigger or key press before it begins playback or recording.

Set Loop
Click this button to insert a permanent loop in the currently selected region in one or more tracks.



Overdub Record
During normal recording, Performer erases existing music in the track. Use Overdub Record to preserve existing material and merge new material with it. Use it whenever you are cycle-recording so that each new pass through the loop doesn't erase the last pass.

Memory Cycle
When this button is highlighted (on), Performer cycles playback and recording between the Start and Stop times displayed below in the Memory bar.

For more information, see chapter 5, "The Consolidated Controls Panel" (page 63) in the Performer Reference manual.

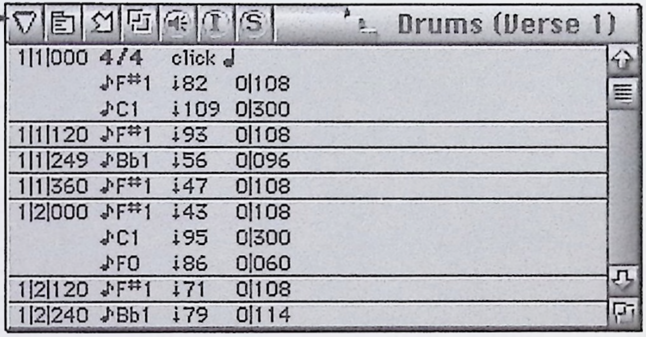
Performer's unique interface

Before you go any further, here are several unique aspects to Performer's overall design that you should be familiar with. They are easy to learn and streamline your working environment in Performer.

Pushdown button
The Pushdown button moves the window behind all other windows. This is useful when you don't want to close the window, but you'd like to move it out of the way temporarily.

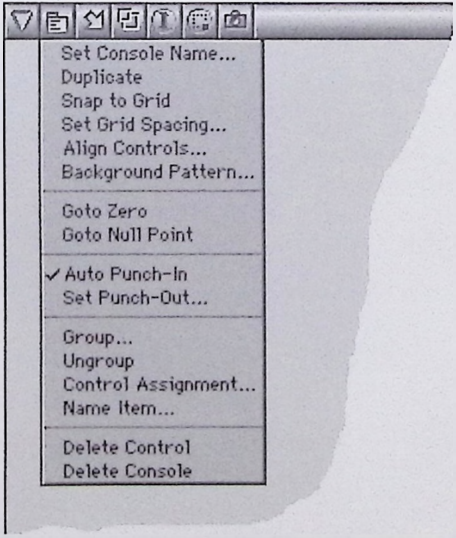
Zoom button
Opens the window to the full size of your screen or to a size that show all of its contents. If you click it again, it returns to its original size.

Close button
Closes the window.


Drums (Verse 1)

```
1|1|000 4/4  click ♩
        ♪F#1  ↓82   0|108
        ♪C1   ↓109  0|300
1|1|120 ♪F#1  ↓93   0|108
1|1|249 ♪Bb1  ↓56   0|096
1|1|360 ♪F#1  ↓47   0|108
1|2|000 ♪F#1  ↓43   0|108
        ♪C1   ↓95   0|300
        ♪F0   ↓86   0|060
1|2|120 ♪F#1  ↓71   0|108
1|2|240 ♪Bb1  ↓79   0|114
```

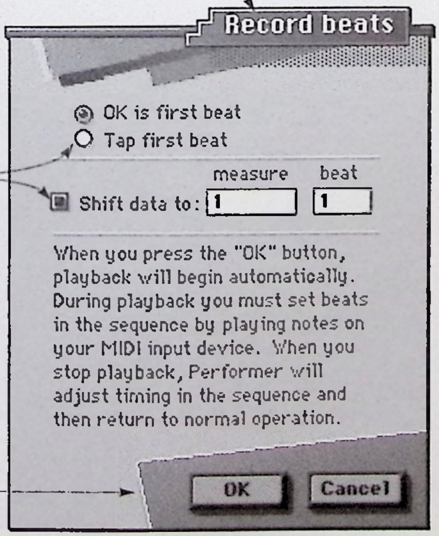
Window mini-menu
Contains commands that apply only to the window that contains the menu. To pull it down, press on the menu icon and then select a menu option as you would in a standard Macintosh menu.


Set Console Name...
Duplicate
Snap to Grid
Set Grid Spacing...
Align Controls...
Background Pattern...
Goto Zero
Goto Null Point
✓ Auto Punch-In
Set Punch-Out...
Group...
Ungroup
Control Assignment...
Name Item...
Delete Control
Delete Console

Drag the title bar of the dialog box to move it on the screen—in case you need to see something behind it before closing it.

Performer's three dimensional radio buttons and check boxes function just like standard Macintosh buttons. For example, you can click the text label of the button to select the button.

Three dimensional OK and Cancel buttons.


Record beats

● OK is first beat
○ Tap first beat

☒ Shift data to: measure 1 beat 1

When you press the "OK" button, playback will begin automatically. During playback you must set beats in the sequence by playing notes on your MIDI input device. When you stop playback, Performer will adjust timing in the sequence and then return to normal operation.

OK
Cancel

The Tracks Window

For more information, see chapter 12, "The Tracks Window" (page 163) in the Performer Reference manual.

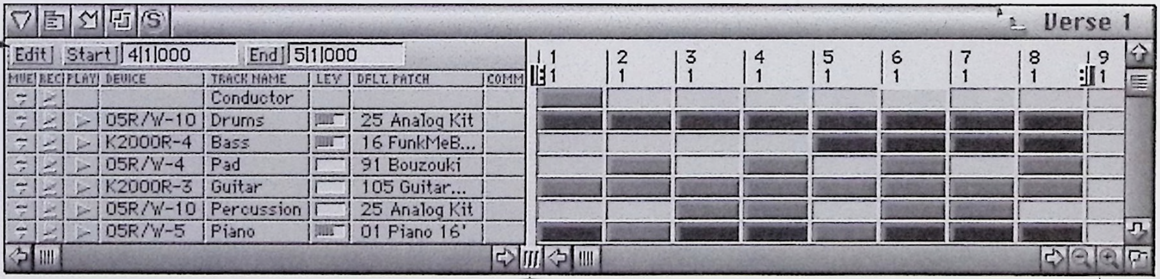
The Tracks window is based on the familiar concept of a multi-track tape deck. Each track can be play-enabled, recorded into, and soloed. Each track has an activity level meter, a MIDI playback assignment (one of the devices in your MIDI studio), a track name, comments, and perhaps an initial patch (sound) to play. You can add an unlimited number of tracks, and you can place them in any order in the list. The Tracks overview on the right provides you with a bird's-eye view of the music, showing which measures have music in them. You can drag segments that contain music to move them and to select them for editing. A scrolling playback indicator is also provided to show the current playback location.

Selecting and editing with The Edit Bar

The start and end times in the edit bar determine the region of time in the currently selected track(s) that will be affected by commands you choose from the Edit and Region menus. In addition to typing in times by hand, there are many useful shortcuts for setting the start and end times. For example, you can click the Start and End buttons to set them to the current playback location—even on the fly during playback. You can also double-click them to automatically go to the beginning or end of the sequence.

The Tracks Overview

Provides you with a view of the music in the tracks. The time ruler above indicates the measure in each column. The ruler also displays draggable memory-cycle repeat barlines and auto-record punch points. Double-click the ruler to make playback jump to that location. In the grid, colored segments contain music (or other MIDI data). Dark segments indicate dense data. Drag segments to move them. Click them or drag over them to select them for editing using the commands in the Edit and Region menus.



Edit | Start | 4|1|000 | End | 5|1|000

MVE	REC	PLAY	DEVICE	TRACK NAME	LEV	DFLT. PATCH	COMM
				Conductor			
			05R/W-10	Drums		25 Analog Kit	
			K2000R-4	Bass		16 FunkMeB...	
			05R/W-4	Pad		91 Bouzouki	
			K2000R-3	Guitar		105 Guitar...	
			05R/W-10	Percussion		25 Analog Kit	
			05R/W-5	Piano		01 Piano 16'	

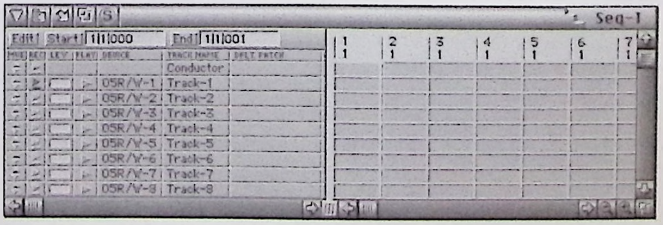
A track is represented as one row in the list. It has a move handle, record-enable button, play-enable button, MIDI device assignment (for playback), a name (option-click to rename it), level meter that shows MIDI activity, a default patch (sound), a current patch, and a comment. You can choose to hide any of these columns by double-clicking the column title. For example, if you never use default patches, you can hide the column. The **Conductor track** at the top of the list doesn't hold MIDI data; instead, it holds tempos, meter changes, key changes, and markers (explained later).

Divider
Drag this handle left and right to show more or less of the Tracks Overview.

The ruler can be **zoomed** to show more or less time in each column. Right now, each column represents one measure. You can zoom in, however, so that each column represents one beat. Or zoom out so that each column is two bars instead of one.

Opening a new file

When you open a new file, the Tracks window looks something like this. The columns may be in a slightly different order from left to right.



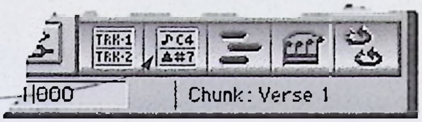
Edit | Start | 1|1|000 | End | 1|1|001

MVE	REC	LEV	PLAY	DEVICE	TRACK NAME	DFLT PATCH
					Conductor	
				05R/W-1	Track-1	
				05R/W-2	Track-2	
				05R/W-3	Track-3	
				05R/W-4	Track-4	
				05R/W-5	Track-5	
				05R/W-6	Track-6	
				05R/W-7	Track-7	
				05R/W-8	Track-8	

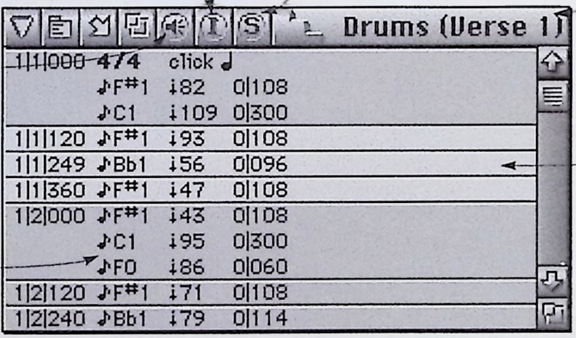
The Event List

The event list gives you a precise, numerical display of the MIDI data in a track. To open it, double-click the track name or a segment in the Tracks Overview. Or highlight either one and click the Event List button in the Consolidated Control panel. To temporarily hide any type of data, use the View Filter in the mini-menu.

For more information, see chapter 20, "The Event List Window" (page 257) in the Reference manual.



Event List button



```
~~1|1|000~~ 4/4     click ♩
        ♪F#1  ↓82   0|108
        ♪C1   ↓109  0|300
1|1|120 ♪F#1  ↓93   0|108
1|1|249 ♪Bb1  ↓56   0|096
1|1|360 ♪F#1  ↓47   0|108
1|2|000 ♪F#1  ↓43   0|108
        ♪C1   ↓95   0|300
        ♪F0   ↓86   0|060
1|2|120 ♪F#1  ↓71   0|108
1|2|240 ♪Bb1  ↓79   0|114
```

Insert Menu
Select any type of data from this menu to insert it at any location in the track.

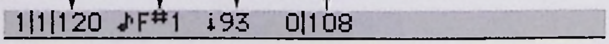
Solo button
Solos the current track during playback. Double-click the button to configure soloing.

Window Title
In all of Performer's edit windows, as a shortcut, you can switch to a different track by command-clicking the title to open a pop-up menu of other tracks.

Audible Mode
When this button is turned on, notes play when you click them. To play a phrase, select a group of notes and option-click the button.

Selecting events
To select a single note or event, click it. To select several in a row, drag over them. (Use command-click to extend the selection.) Once you've selected notes, you can edit them any way you want with the commands in the Edit and Region menus.

Chord
These three notes are a chord because they all occur at the same time.



```
1|1|120 ♪F#1 ↓93  0|108
```

Location (measure, beat, and tick)

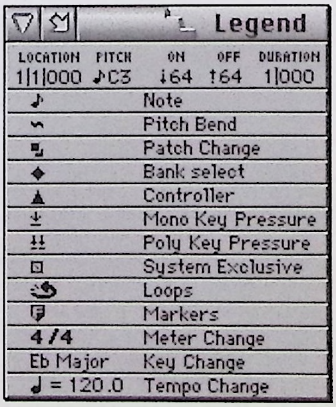
Pitch

On-velocity

Duration (Beats and ticks)

A note event

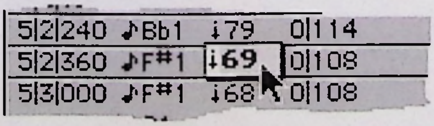
Legend
Use the Legend in the Event List mini-menu to identify each type of MIDI data.



LOCATION	PITCH	ON	OFF	DURATION
1|1|000	♪C3	↓64	↑64	1|000

♪	Note
∽	Pitch Bend
▪	Patch Change
◆	Bank select
▲	Controller
↓	Mono Key Pressure
↓↓	Poly Key Pressure
⊡	System Exclusive
↻	Loops
⚑	Markers
4/4	Meter Change
Eb Major	Key Change
♩ = 120.0	Tempo Change

Pop-editing
Double-click any value to pop-edit it

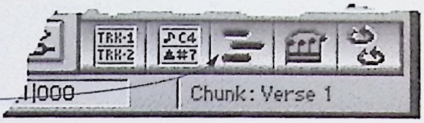


```
5|2|240 ♪Bb1  ↓79  0|114
5|2|360 ♪F#1  ↓69  0|108
5|3|000 ♪F#1  ↓68  0|108
```

The Graphic Editing window

The Graphic Editing window displays notes and MIDI controllers in a track on a piano-roll style grid. To open it, command-double-click the track name or any segment in the Tracks Overview. Or click them once and then click the Graphic Editing button in the Consolidated Control panel.

For more information, see chapter 21, "The Graphic Editing Window" (page 281) in the Reference manual.



Graphic Editing button

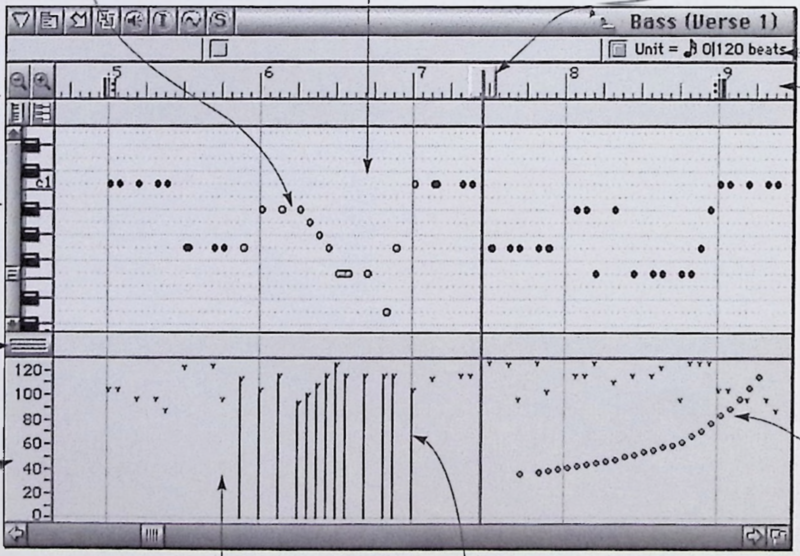
Zooming
Zoom the time ruler and pitch ruler with these buttons.

Selected Notes
To select several notes, drag the cursor over them, just like you would in a graphics program.

Note Grid
Insert and edit notes in this grid. Drag notes up and down to change pitch. Drag left and right to change their time. To change duration, drag the right end of the note.

Scrolling Wiper
Indicates the current playback location. Double-click anywhere in the ruler to make the playback wiper jump to that location.

Edit Resolution
Check the Edit resolution box to make everything "snap" to a rhythmic grid as you drag it, including notes, loop points, and even region selection.



Pitch Ruler
Double-click a key to automatically select all notes of that pitch in the track.

Time Ruler
Shows time in measures, beats and ticks. To select a region, drag in the ruler. To change the memory-cycle points or auto-record punch points, drag them.

Drag this handle to display more or less of the note grid and continuous data grid. You can even drag it all the way up or down to hide either grid.

Continuous Data Ruler
Click this ruler repeatedly to switch between three different controller displays: controllers only (0-127), pitch bend only (-8192 to 8191), or both.

Continuous Data Grid
Displays note velocities, MIDI controllers, and pitch bend data.

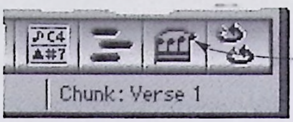
Selected note velocities
To graphically edit velocities (or a controller curve), select them by dragging over them. Then click the Reshape button in the title bar and drag across the selected data.

Inserting curves
To insert a curve like this, set the edit resolution to determine the time interval of the individual events. Then choose the type of data you want to insert from the Insert menu ("I") in the title bar. Then drag from left to right in the grid. Option-drag to draw a line that generates a smooth curve.

QuickScribe notation window

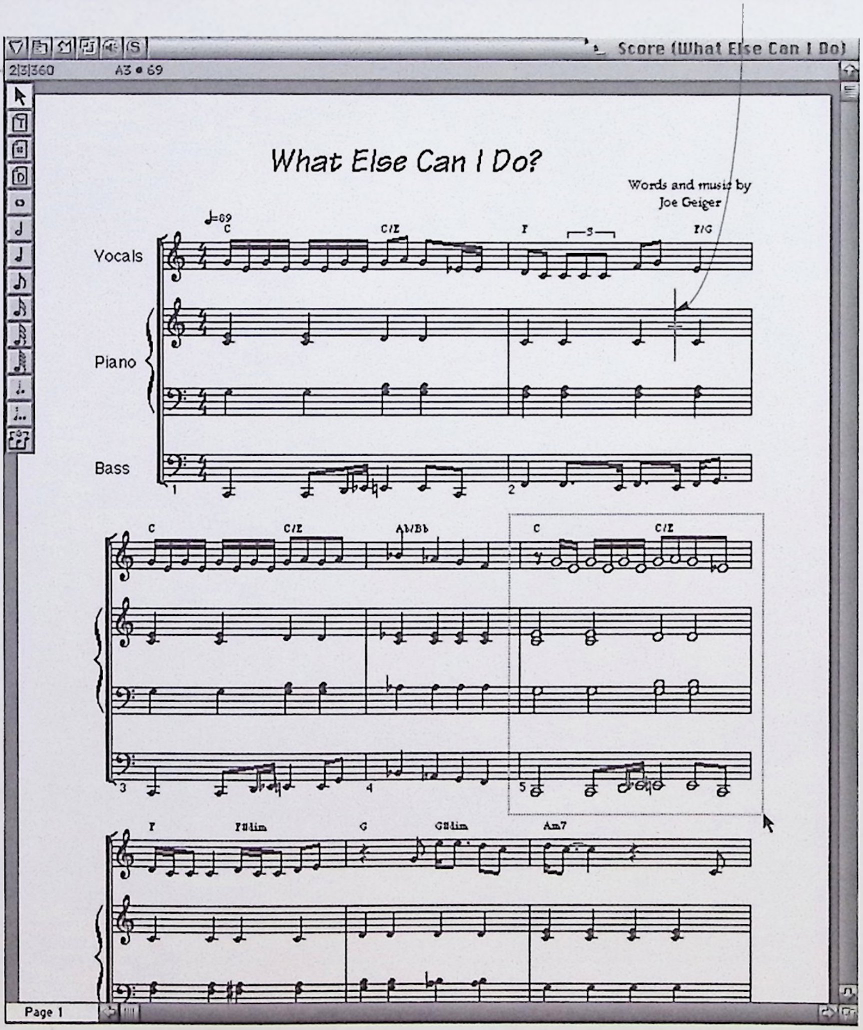
For more information, see chapter 23, "QuickScribe Notation" (page 345) in the Reference Manual.

The QuickScribe notation window displays music from one or more tracks on a page in standard music notation. To open it, select a track by clicking its name in the Tracks window—or shift-click as many as you like. Then choose the range of measures you'd like to see by setting the start and end times in the Edit bar. To quickly select the entire piece, double-click the Edit button. Then click the QuickScribe notation button in the main control panel. The music is formatted just like it will print out.



QuickScribe Notation button

Entering notes with Mac keyboard
Click the staff with the arrow to get this cursor. Choose durations from the keypad. Press return to insert the note.



Cursor coordinates
Shows the exact location of the cursor for note insertion.

Tool Palette
Click a duration in the palette. Press anywhere in the desired measure and while holding down the mouse, drag to any pitch and location. Watch the cursor coordinates for precise feedback about where you are in the measure. You don't have to get the pitch exactly right when you first click because you can drag up or down after you press the mouse to get just the right pitch and accidental. The mouse automatically snaps to even subdivisions of the beat to make rhythmic placement easy.

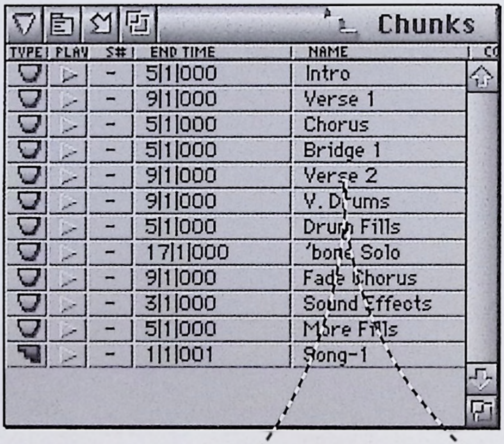
Transcription
Even though the notation looks quantized, the MIDI data in the track remains in its original, unquantized form. If Performer doesn't transcribe a section quite right, you can quantize the data to improve the rhythmic interpretation.

Step Recording
Click the staff with the arrow to get the insertion cursor. Use the arrow keys to place it at the desired location. Choose a duration in the palette. Play the notes on your MIDI controller.

The Chunks list, sequences, and songs

For more information, see chapter 14, "The Chunks Window" (page 205) in the Reference manual.

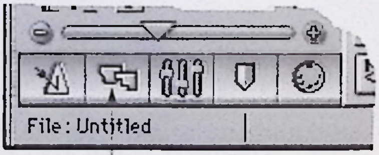
So far, you've been introduced to the Tracks list and three ways to view the MIDI data recorded into tracks. In Performer terminology, the Tracks window and the set of tracks it contains are called a *sequence*. But you are not limited to just one sequence in a Performer file. You can have as many sequences as you want. Sequences are displayed in the Chunks list window. The Chunks list also displays another type of chunk called a *song*. Together, sequences and songs are referred to as *chunks*, so read the word *chunk* as *sequence and/or song*. The Chunks window is great for "pattern-based" sequencing, where you build parts of a song separately and then combine them into a song as shown on the next page.



TYPE	PLAY	S#	END TIME	NAME
▽	▷	-	5|1|000	Intro
▽	▷	-	9|1|000	Verse 1
▽	▷	-	5|1|000	Chorus
▽	▷	-	5|1|000	Bridge 1
▽	▷	-	9|1|000	Verse 2
▽	▷	-	9|1|000	V. Drums
▽	▷	-	5|1|000	Drum Fills
▽	▷	-	17|1|000	'bone Solo
▽	▷	-	9|1|000	Fade Chorus
▽	▷	-	3|1|000	Sound Effects
▽	▷	-	5|1|000	More Fills
◥	▷	-	1|1|001	Song-1

The Chunks list

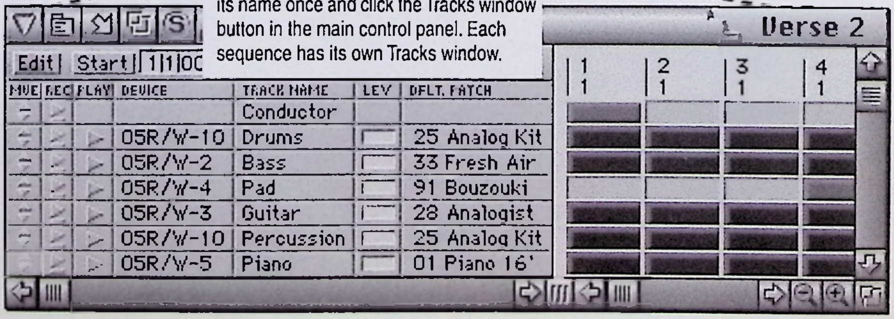
Only one chunk can be play-enabled at a time. Each chunk has a move handle, play-enable button, song select number, end time (which indicates its length), a name (option-click to change it), and comment. To make a copy of a sequence, highlight its name and choose Copy from the Edit menu. Then choose Paste.



To open the Chunks list window, click the **Chunks list button**.

Opening a Tracks window

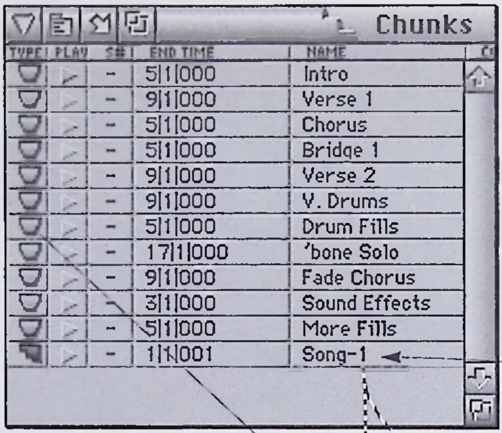
To open the Tracks window for a sequence, double-click its name, or click its name once and click the Tracks window button in the main control panel. Each sequence has its own Tracks window.



MVE	REC	PLAY	DEVICE	TRACK NAME	LEV	DFLT. PATCH
				Conductor		
		▷	05R/W-10	Drums		25 Analog Kit
		▷	05R/W-2	Bass		33 Fresh Air
		▷	05R/W-4	Pad		91 Bouzouki
		▷	05R/W-3	Guitar		28 Analogist
		▷	05R/W-10	Percussion		25 Analog Kit
		▷	05R/W-5	Piano		01 Piano 16'

The Song window

Build a song with sequences and other songs simply by dragging and dropping them into the Song window. Each chunk plays seamlessly from one to the other. The song even has its own conductor track, which can have either a unique tempo map, or a composite tempo map built from its component sequences and songs.

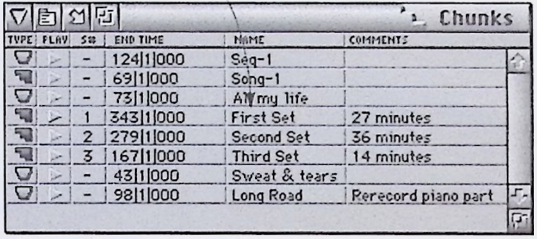


TYPE	PLAY	S#	END TIME	NAME
	▷	-	5|1|000	Intro
	▷	-	9|1|000	Verse 1
	▷	-	5|1|000	Chorus
	▷	-	5|1|000	Bridge 1
	▷	-	9|1|000	Verse 2
	▷	-	9|1|000	V. Drums
	▷	-	5|1|000	Drum Fills
	▷	-	17|1|000	'bone Solo
	▷	-	9|1|000	Fade Chorus
	▷	-	3|1|000	Sound Effects
	▷	-	5|1|000	More Fills
	▷	-	1|1|001	Song-1

Building a song
To build a song, drag any number of sequences and other songs into the song window and "drop" it at an existing column. To drag and drop, grab the chunk's handle.

Building live performance sets
Songs are ideal for building live performance sets because each sequence (or song) can play seamlessly into the next.

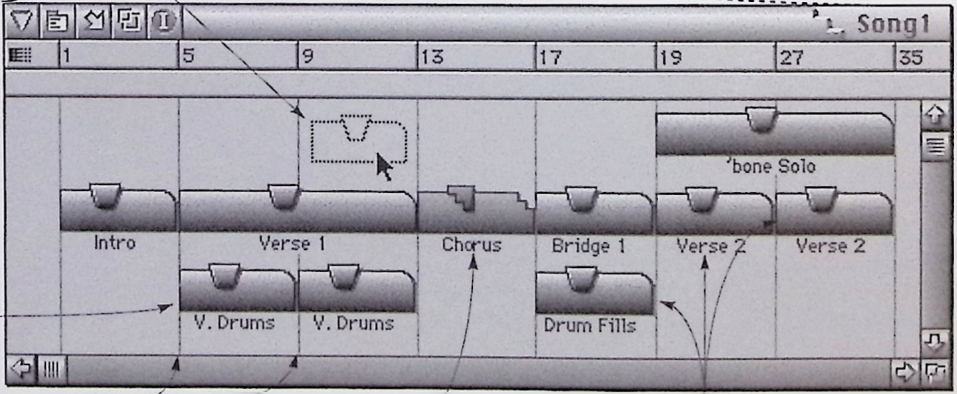
For more information, see chapter 15, "The Song Window" (page 217) in the Reference manual.



TYPE	PLAY	S#	END TIME	NAME	COMMENTS
	▷	-	124|1|000	Seq-1	
	▷	-	69|1|000	Song-1	
	▷	-	73|1|000	All my life	
	▷	1	343|1|000	First Set	27 minutes
	▷	2	279|1|000	Second Set	36 minutes
	▷	3	167|1|000	Third Set	14 minutes
	▷	-	43|1|000	Sweat & tears	
	▷	-	98|1|000	Long Road	Rerecord piano part

To open a song window, double-click its name.

Unique Non-linear Display
The Song window has a unique, non-linear display. Each chunk is given equal length, regardless of its actual duration, which provides you with a condensed view of your music.



Column ruler
Shows the measure and beat location of each chunk in the song.

Stacking chunks
Stack chunks vertically to make them play simultaneously.

Columns
Columns get automatically created at the beginning and end of each chunk. To create a column at any location, use the Insert column button ("I") in the title bar. Chunks "snap" to the nearest column when you drag them.

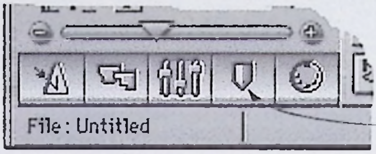
Song Chunk
Songs can be placed inside other songs. Go as many layers deep as you want.

Sequence chunks
To move sequences, drag them up and down or left and right to another column. They "snap" to the nearest column. Double-click a sequence to open its tracks window.

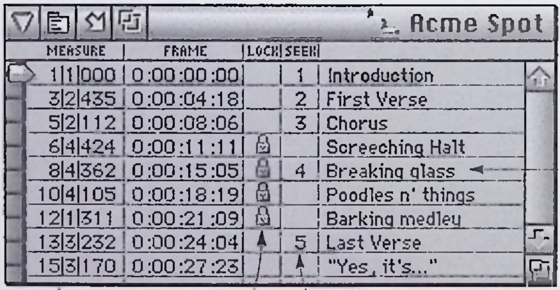
The Markers window

For more information, see chapter 19, 'The Markers Window" (page 245) in the Reference manual.

To open the Markers window, choose Markers from the Windows menu, or click the Markers window button in the Consolidated Controls. A Marker is a particular location in your sequence. It may be at the beginning or end of a section, or it may be a visual "hit point" that occurs at an exact location when you are scoring for film or television. You can add as many markers as you want to your music. They are useful for identifying any location. You can instantly cue to the marker location using the Markers window. Markers appear in all editing windows. The can be cut, copied, and pasted in the Conductor track.



To open the Markers list window, click the **Markers list button**.



MEASURE	FRAME	LOCK	SEEK	
1|1|000	0:00:00:00		1	Introduction
3|2|435	0:00:04:18		2	First Verse
5|2|112	0:00:08:06		3	Chorus
6|4|424	0:00:11:11	🔒		Screeching Halt
8|4|362	0:00:15:05	🔒	4	Breaking glass
10|4|105	0:00:18:19	🔒		Poodles n' things
12|1|311	0:00:21:09	🔒		Barking medley
13|3|232	0:00:24:04		5	Last Verse
15|3|170	0:00:27:23			"Yes, it's..."

Playback Position indicator
Click on this strip to immediately jump playback (and the position indicator) to the marker at that location.

Marker name
Click the marker name to rename it.

Marker location
Marker times can be displayed in all three time formats: measures and beats, SMPTE time code, and real time.

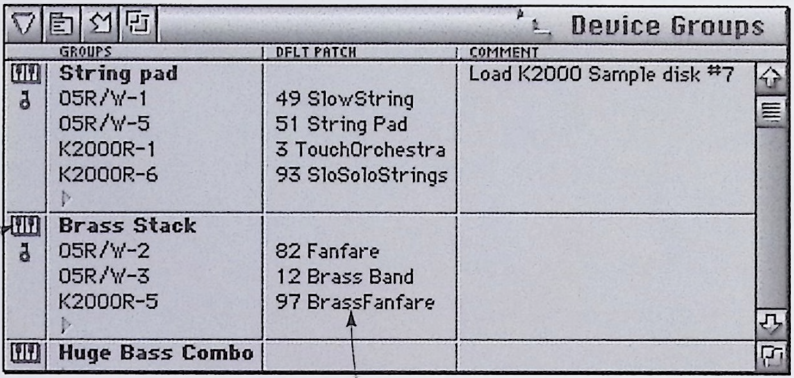
Locked indicator
Attaches the marker to its current SMPTE time code location, regardless of tempo changes.

FreeMIDI seek point
If you are cueing multiple FreeMIDI programs, up to eight markers can serve as FreeMIDI seek points.

Device Groups

For more information, see "Creating a device group" on page 112 in the Reference manual.

Often when you are sequencing, you'll want to be able to make a track play back using several MIDI devices together (or several channels on the same device) to create a layered sound. The Device Groups window lets you define groups of devices. You can then assign any track to the device group. Notes and other data in the track will play on all devices in the group.



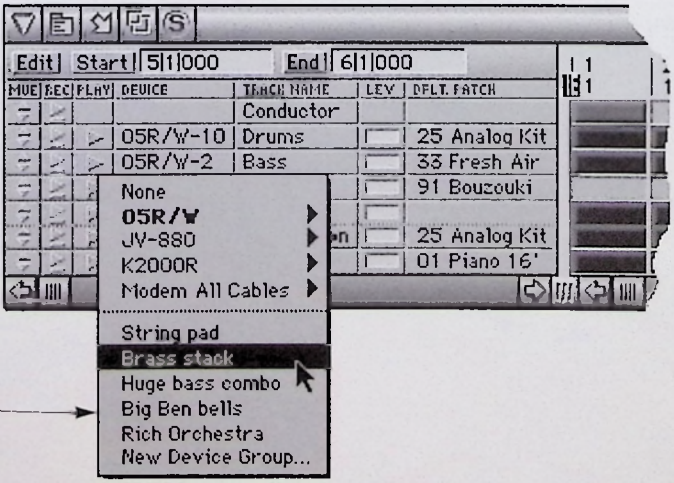
GROUPS	DFLT PATCH	COMMENT
String pad		Load K2000 Sample disk #7
05R/W-1	49 SlowString	
05R/W-5	51 String Pad	
K2000R-1	3 TouchOrchestra	
K2000R-6	93 SloSoloStrings	
Brass Stack		
05R/W-2	82 Fanfare	
05R/W-3	12 Brass Band	
K2000R-5	97 BrassFanfare	
Huge Bass Combo		

Creating a device group

To create a device group, choose Add Device Group from the mini-menu. To name it, double-click the name to pop-edit it. Then click the arrow beneath the name to add the first device to the group. The arrow moves down one line below the new device so that you can always add another device. You can add up to 10 devices in a group.

Using Default Patches

If you want, you can choose a MIDI patch change event that gets sent to the MIDI synth automatically to call up the sound you want for each layer. Patch names like the ones shown here appear when you set up the appropriate patch lists with FreeMIDI's PatchList Manager utility, with Unisyn, or with any FreeMIDI-compatible librarian software.


Edit | Start | 5|1|000 | End | 6|1|000

MUE	REC	PLAY	DEVICE	TRACK NAME	LEV	DFLT. PATCH
				Conductor		
			05R/W-10	Drums		25 Analog Kit
			05R/W-2	Bass		33 Fresh Air
						91 Bouzouki
				…n		25 Analog Kit
						01 Piano 16'

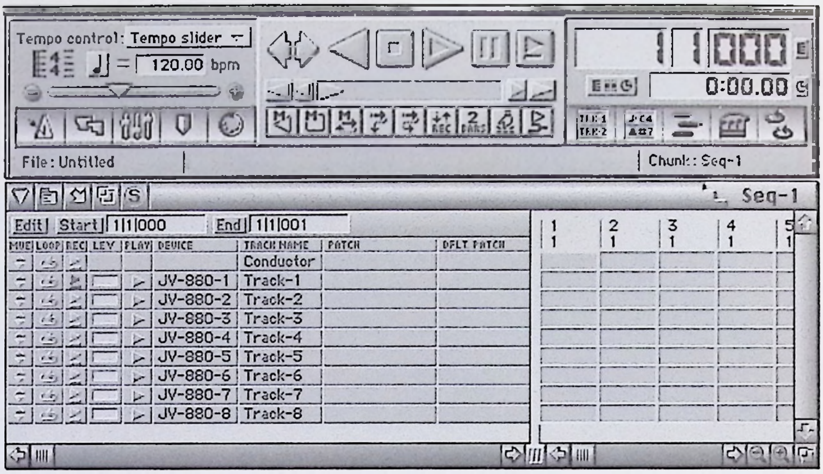
Using Device groups

To assign a track to a device group, just select it from the device pop-up menu next to the track. Device groups are available in Performer wherever this playback assignment pop-up menu appears.

Recording

Recording into Performer is easy. This section gives you a quick overview. The tutorial chapters following this one provide a more in-depth introduction.

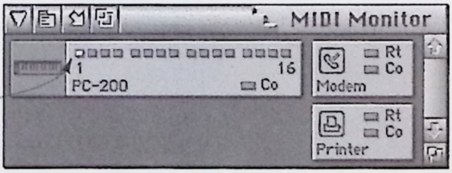
For more information, see chapter 9, "Recording" (page 127) in the Reference manual.


Tempo control: Tempo slider
120.00 bpm
0:00.00
File: Untitled
Chunk: Seq-1
Seq-1

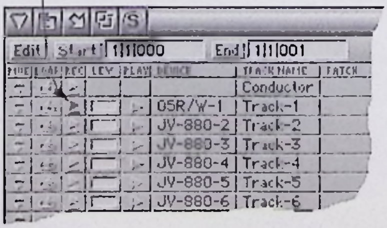
Edit	Start	1|1|000	End	1|1|001				
MUTE	LOOP	REC	LEV	PLAY	DEVICE	TRACK NAME	PATCH	DFLT PATCH
						Conductor		
					JV-880-1	Track-1		
					JV-880-2	Track-2		
					JV-880-3	Track-3		
					JV-880-4	Track-4		
					JV-880-5	Track-5		
					JV-880-6	Track-6		
					JV-880-7	Track-7		
					JV-880-8	Track-8		

1 **Open a new file.**
If you haven't opened Performer yet, double-click the Performer icon and a new file will open after a moment. If Performer is already open, and you have a file on the screen, choose Close from the File menu and then choose New.

2 **Check to make sure that Performer is receiving MIDI from your controller.**
To do so, open the MIDI Monitor from the Windows menu. When you play notes on your controller, watch the MIDI activity indicators. One of them should light up. If not, see "Testing for MIDI input and output" on page 62 of this guide. If your controller isn't present in the MIDI Monitor, choose it from the MIDI Monitor window mini-menu.

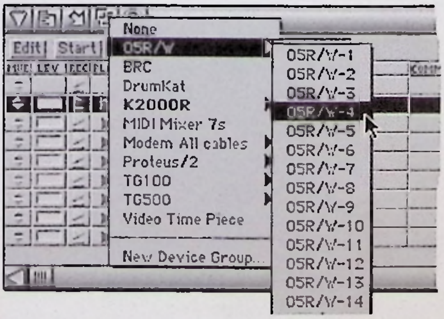

MIDI Monitor
1
16
PC-200
Co
Rt
Co
Modem
Rt
Co
Printer

3 **Record-enable the track you want to record on.**
In a new Performer file, the first track is already record-enabled. When it is, the record button is red (black on a monochrome monitor).

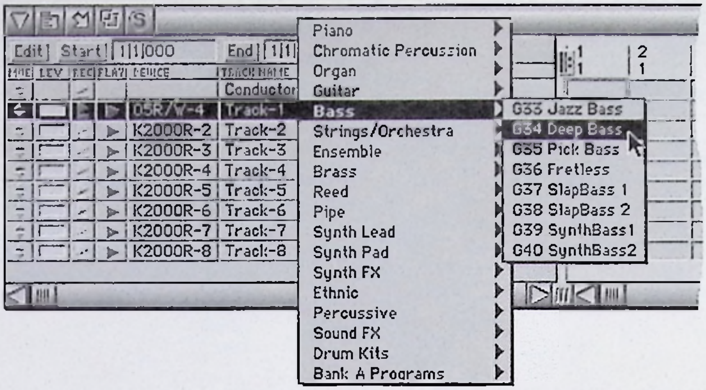


Edit	Start	1|1|000	End	1|1|001			
MUTE	LOOP	REC	LEV	PLAY	DEVICE	TRACK NAME	PATCH
						Conductor	
					05R/W-1	Track-1	
					JV-880-2	Track-2	
					JV-880-3	Track-3	
					JV-880-4	Track-4	
					JV-880-5	Track-5	
					JV-880-6	Track-6	

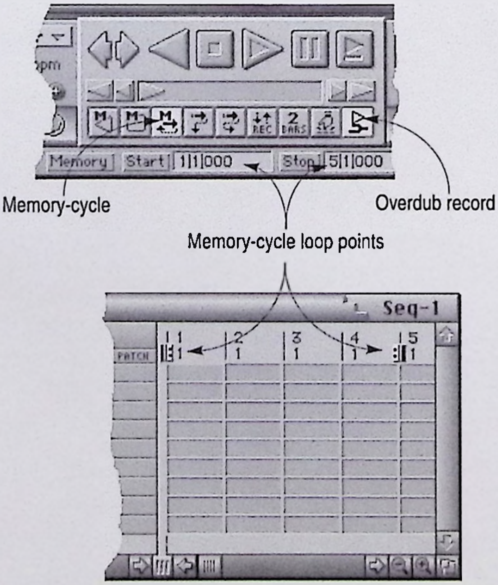
4 **Choose a playback device and channel for the Track.**
Select the device and MIDI channel you want to hear as you record. Remember, you can always change the playback assignment later. To select a playback device, press the name of the current device (in the device column) next to the record track to get a pop-up menu of devices in your studio like the one shown below.


Edit
Start
None
05R/W
BRC
DrumKat
K2000R
MIDI Mixer 7s
Modem All cables
Proteus/2
TG100
TG500
Video Time Piece
New Device Group...
05R/W-1
05R/W-2
05R/W-3
05R/W-4
05R/W-5
05R/W-6
05R/W-7
05R/W-8
05R/W-9
05R/W-10
05R/W-11
05R/W-12
05R/W-13
05R/W-14

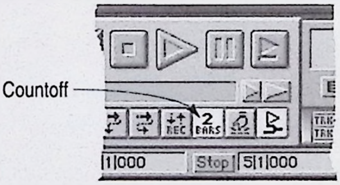
❺ **Choose a sound on the Track's playback device and channel.**
You have several ways to do this. One way is to call up the sound on the synthesizer itself using the front panel controls. If you have already set up patch lists using FreeMIDI's PatchList Manager, you can choose a sound by name from the Patch column pop-up menu as shown here. Otherwise, you'll see a generic list with "Patch-1, Patch-2" etc.


Edit
Start 1|1|000
End 1|1|
Conductor
05R/W-4 Track-1
K2000R-2 Track-2
K2000R-3 Track-3
K2000R-4 Track-4
K2000R-5 Track-5
K2000R-6 Track-6
K2000R-7 Track-7
K2000R-8 Track-8
Piano
Chromatic Percussion
Organ
Guitar
Bass
Strings/Orchestra
Ensemble
Brass
Reed
Pipe
Synth Lead
Synth Pad
Synth FX
Ethnic
Percussive
Sound FX
Drum Kits
Bank A Programs
G33 Jazz Bass
G34 Deep Bass
G35 Pick Bass
G36 Fretless
G37 SlapBass 1
G38 SlapBass 2
G39 SynthBass1
G40 SynthBass2

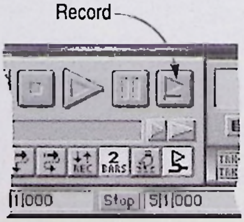
❻ **If you want to cycle-record (loop record), turn on Memory-cycle and Overdub record, and set the loop points.**
The memory-cycle button causes Performer to loop a region. Set the length of the region by dragging the repeat barlines in the Tracks overview or by typing in the desired times in the Memory bar. Overdub record mode causes each new record pass to be merged with previous ones. Without Overdub, Performer drops out of record at the end of the first pass.

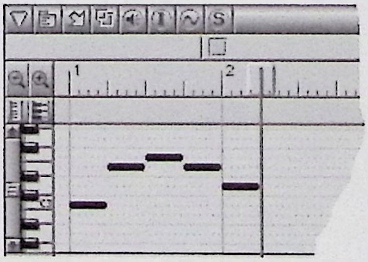

Memory Start 1|1|000 Stop 5|1|000
Memory-cycle
Overdub record
Memory-cycle loop points
Seq-1
PATCH
1
2
3
4
5

❼ **If you want a few bars of countoff before you begin recording, press the Countoff button.**
This button gives you two measures of the metronome click before Performer begins recording. Double-click the button to change the number of countoff measures and other metronome settings.


Countoff
2 BARS
1|000 Stop 5|1|000

❽ **Set the tempo with the tempo slider. When you are ready to begin recording, press the record button.**
Don't worry about making a mistake. You can always delete the notes and try again. Or you can choose Undo Record from the Edit menu. If you want to see what you are recording, open the track's Event List, Graphic Editing window, and/or QuickScribe Notation windows. The notes appear in these windows as you record.


Record
2 BARS
1|000 Stop 5|1|000



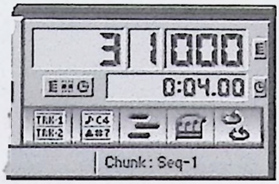
Step-Record

For more information, see chapter 10, "Step Record" (page 139) in the Reference manual.

Step-Record, available in the Basics menu, is one of the most important and powerful features in Performer. It is an alternative to real-time recording: it waits for you to enter notes one at a time and allows you to specify the duration of each. Step-Record is ideal for passages too complex for real-time entry. Notes you enter in Step-Record are rhythmically precise (they won't need quantizing).

1 — 5 **Steps 1 through 5 are the same as steps 1-5 for regular recording described in the previous section.**

6 **Set the main counter to the location at which you would like to begin step-recording.**
You can type in the location directly into the counter. You can also double-click the time ruler in the Tracks Overview or a Graphic Editing window.

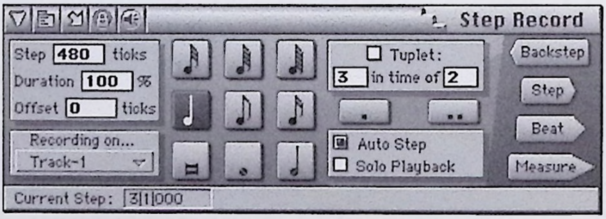


3|1|000

0:04.00

Chunk: Seq-1

7 **Open the Step-Record window by choosing it from the Basics menu.**
When you do so, Performer automatically goes into record mode and is ready to record the first note.



Step Record

Step 480 ticks

Duration 100 %

Offset 0 ticks

Recording on... Track-1

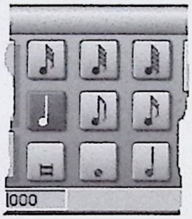
☐ Tuplet: 3 in time of 2

☒ Auto Step

☐ Solo Playback

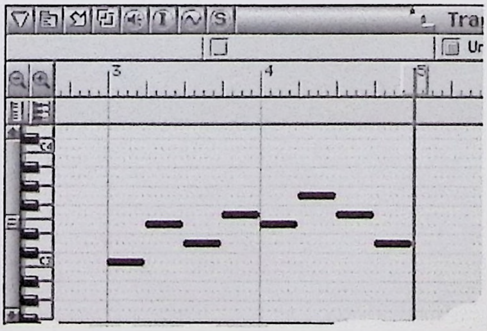
Current Step: 3|1|000

8 **Choose the desired duration of the note(s) you would like to enter.**
Click the appropriate note duration button and a dot, if necessary. If you are inserting triplets or tuplets, use the tuplet check box and type in the desired tuplet value.



9 **Play one or more notes on your MIDI controller.**
Notes are inserted into the track with the chosen duration. Notice that the main counter updates with each step. Here are a few tips:

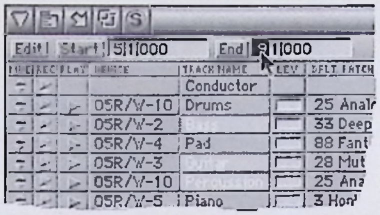
- Notes are inserted when you release the key.
- Play notes as slowly as you like.
- Change duration whenever you want by simply clicking a different duration.
- Play notes and chords in a staccato fashion to prevent accidentally inserting notes from the next step.
- To prevent other tracks from playing as you step, use the Solo Playback option.
- As you step, Performer's main counter follows your progress, and other tracks play back at the same time. To disconnect from the main counter, click the Lock button in the Step Record window title bar.
- To insert a rest, press the Step button.
- To insert silence and advance to the next beat or measure, click the Beat or Measure buttons.
- Open an Event List, Graphic Editing, or Notation window so you can see what you are recording.
- To stop, close Step Record.



Selecting

For more information, see chapter 25, "Selecting Regions" (page 387) in the Reference manual.

Once you've recorded, Performer provides powerful editing features to mould your music any way you want. But *before* you can edit even a single note, Performer needs to know exactly *what* you want to edit. This sections shows you some of the many convenient ways to select music in Performer. Once you've selected it, you can unleash Performer's powerful editing features.


Edit | Start | 5|1|000 End | 9|1|000

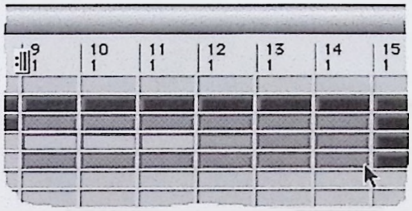
MUTE	REC	PLAY	DEVICE	TRACK NAME	LEV	DFLT PATCH
				Conductor		
			05R/W-10	Drums		25 Anal
			05R/W-2	Bass		33 Deep
			05R/W-4	Pad		88 Fant
			05R/W-3	Guitar		28 Mut
			05R/W-10	Percussion		25 Ana
			05R/W-5	Piano		3 Hon

Using the Edit Bar in the Tracks window

Set the start and end times, and then select the tracks you want to edit within the those times. To set the start and end times, type them in. Or click the start and end button during playback to load the current playback location. To quickly select the entire length of the sequence, double-click the edit button. To select a single track, click its name. To select several non-adjacent tracks, shift-click each one. To select a group of adjacent tracks, drag over their names. To select all tracks, press command-A.

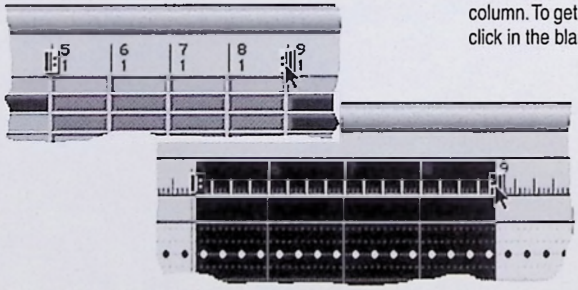
Using the Tracks Overview

Zoom the display to a useful zoom level. Then drag over the segments you want to select. To select non-adjacent segments, shift-click each one. To select an entire column, click in the time ruler above the column. To get rid of the current selection, click in the blank space below the grid.



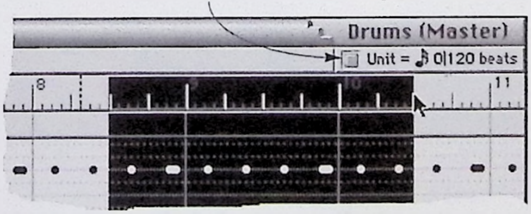
Selecting the Memory-cycle region

Double-click either loop point in the Tracks Overview or Graphic Editing window ruler.



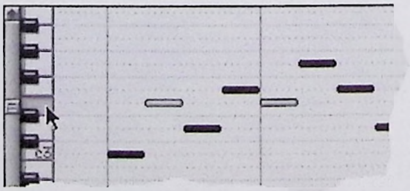
Dragging in the graphic editing window time ruler

Any notes or controller data within the highlighted region becomes selected. To make your dragging "snap" to rhythmic grid locations, check the Edit Resolution box and set the desired grid resolution.



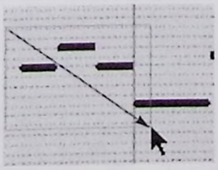
Selecting all notes of the same pitch

Double-click the key on the pitch ruler in the Graphic Editing window.



Selecting in the note grid

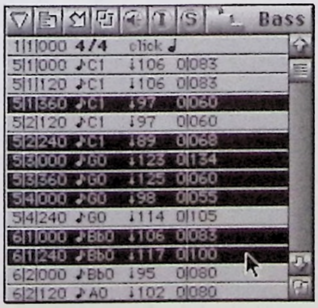
Drag a rectangle over the beginning of the notes you want to select.



Also read about the Remember Times command in the section "Shortcuts for using the Edit Bar" on page 388 in the Reference manual.

Using the event list

Click an event to select it. To select several non-adjacent events, shift-click each one. To select a group of adjacent events, drag over them. To extend the current selection, command-click. To select all events, press command-A.

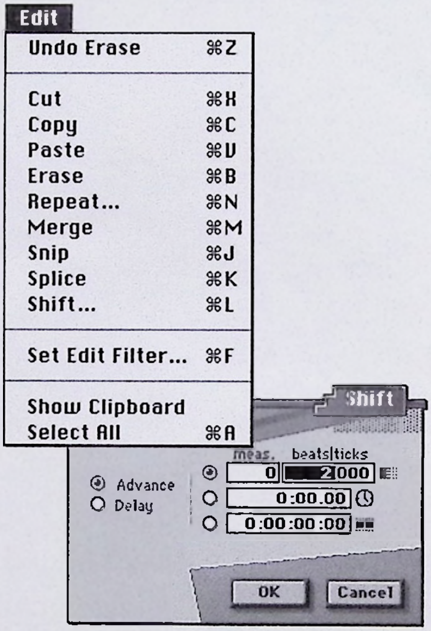


```
1|1|000 4/4   click ♩
5|1|000 ♪C1  ↓106  0|083
5|1|120 ♪C1  ↓106  0|083
5|1|360 ♪C1  ↓97   0|060
5|2|120 ♪C1  ↓97   0|060
5|2|240 ♪C1  ↓89   0|068
5|3|000 ♪G0  ↓123  0|134
5|3|360 ♪G0  ↓125  0|060
5|4|000 ♪G0  ↓98   0|055
5|4|240 ♪G0  ↓114  0|105
6|1|000 ♪Bb0 ↓106  0|083
6|1|240 ♪Bb0 ↓117  0|100
6|2|000 ♪Bb0 ↓95   0|080
6|2|120 ♪A0  ↓102  0|080
```

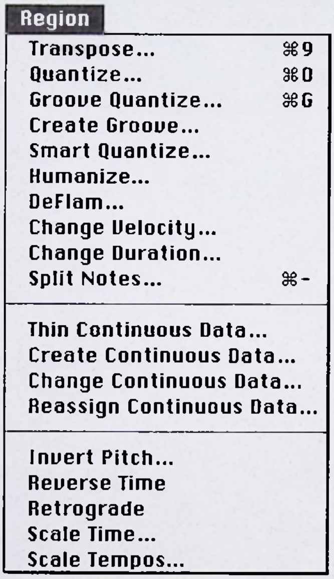
Editing

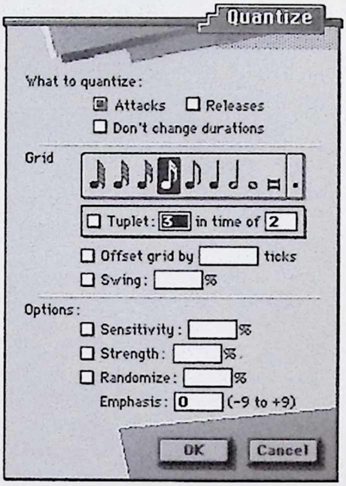
For more information see chapter 26, "Edit Commands" (page 395) chapter 27, "Region Commands 1" (page 409), and chapter 28, "Region Commands 2" (page 451) in the Reference manual.

Once you've selected your music, you can choose any command in the Edit menu or Region menu. For many of them, a dialog box appears on the screen with many powerful options—much more than can be covered here. A few samples are shown below. Most Edit and Region menu commands can be applied during playback, so you don't have to stop the music to hear the effect. Some, like Groove Quantize, allow you to apply the effect in real time, so you have instant feedback, without even closing the command's window.

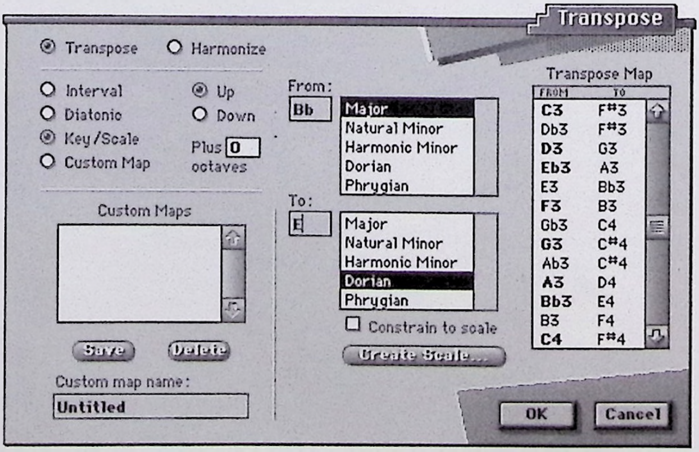

Edit
Undo Erase ⌘Z
Cut ⌘X
Copy ⌘C
Paste ⌘V
Erase ⌘B
Repeat... ⌘N
Merge ⌘M
Snip ⌘J
Splice ⌘K
Shift... ⌘L
Set Edit Filter... ⌘F
Show Clipboard
Select All ⌘A
Shift
meas. beats|ticks
OK
Cancel

● Advance
○ Delay
● 0 | 2|000
○ 0:00.00
○ 0:00:00:00


Region
Transpose... ⌘9
Quantize... ⌘0
Groove Quantize... ⌘G
Create Groove...
Smart Quantize...
Humanize...
DeFlam...
Change Velocity...
Change Duration...
Split Notes... ⌘-
Thin Continuous Data...
Create Continuous Data...
Change Continuous Data...
Reassign Continuous Data...
Invert Pitch...
Reverse Time
Retrograde
Scale Time...
Scale Tempos...


Quantize
OK
Cancel

What to quantize:
☒ Attacks ☐ Releases
☐ Don't change durations
Grid
☐ Tuplet: 3 in time of 2
☐ Offset grid by ticks
☐ Swing: %
Options:
☐ Sensitivity: %
☐ Strength: %
☐ Randomize: %
Emphasis: 0 (-9 to +9)


Transpose
Transpose Map
FROM TO
Custom Maps
Save
Delete
Create Scale...
OK
Cancel

● Transpose ○ Harmonize
○ Interval ● Up
○ Diatonic ○ Down
● Key/Scale Plus 0 octaves
○ Custom Map

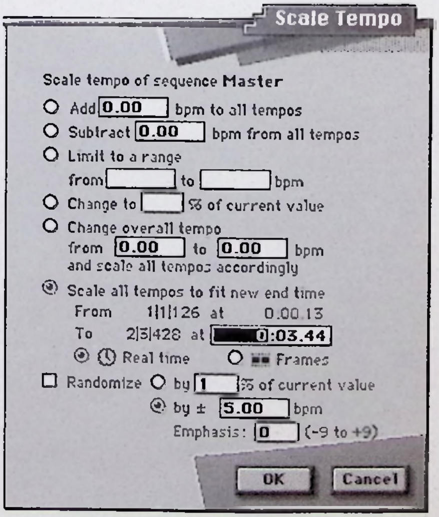
From: Bb
Major
Natural Minor
Harmonic Minor
Dorian
Phrygian

To: E
Major
Natural Minor
Harmonic Minor
Dorian
Phrygian

☐ Constrain to scale

Custom map name: Untitled

FROM	TO
C3	F#3
Db3	F#3
D3	G3
Eb3	A3
E3	Bb3
F3	B3
Gb3	C4
G3	C#4
Ab3	C#4
A3	D4
Bb3	E4
B3	F4
C4	F#4


Scale Tempo
OK
Cancel

Scale tempo of sequence Master
○ Add 0.00 bpm to all tempos
○ Subtract 0.00 bpm from all tempos
○ Limit to a range
from to bpm
○ Change to % of current value
○ Change overall tempo
from 0.00 to 0.00 bpm
and scale all tempos accordingly
● Scale all tempos to fit new end time
From 1|1|126 at 0:00.13
To 2|3|428 at 0:03.44
● Real time ○ Frames
☐ Randomize ○ by 1 % of current value
● by ± 5.00 bpm
Emphasis: 0 (-9 to +9)

Mixing with consoles

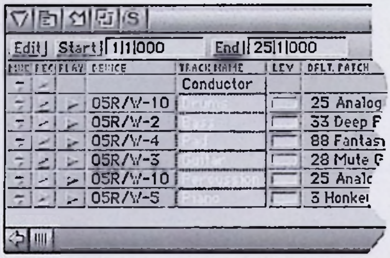
For more information, see chapter 31, "Custom Control Consoles" (page 505) in the Reference manual.

After recording and editing comes mixing. Many MIDI devices nowadays respond to automatic mixing effects such as volume and panning that you program directly in Performer. Performer can instantly generate a mixing console for your sequence, with a volume fader and pan knob for each track. You can even build your own customized consoles, adding your own faders, knobs, pop-up menus, value boxes and more.

1. **To create a mixing console, select the tracks you would like to include in the mix.** Use the techniques you just learned in the section "Selecting" on page 83.

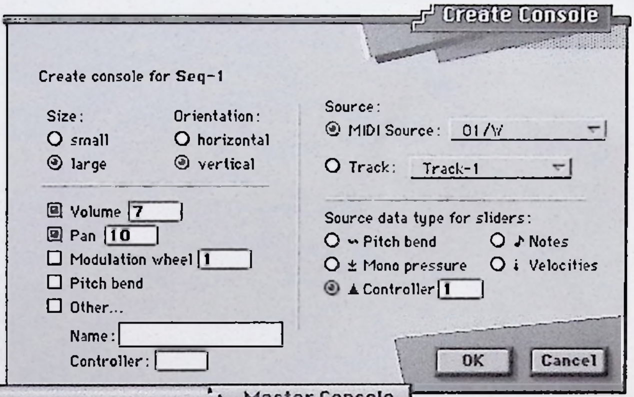
2. **Choose Create Console from the Tracks window mini-menu.**

3. **Choose the orientation you'd like, and click the volume and pan options.** These are the only buttons you need to click to get the console. You can add other controls, if you'd like. Click OK when you are done.



Edit | Start | 1|1|000 | End | 25|1|000

MUTE	REC	PLAY	DEVICE	TRACK NAME	LEV	DFLT. PATCH
				Conductor		
			05R/W-10	Drums		25 Analog
			05R/W-2	Bass		33 Deep F
			05R/W-4	Pad		88 Fantas
			05R/W-3	Guitar		28 Mute G
			05R/W-10	Percussion		25 Analc
			05R/W-5	Piano		3 Honkei



Create console for Seq-1

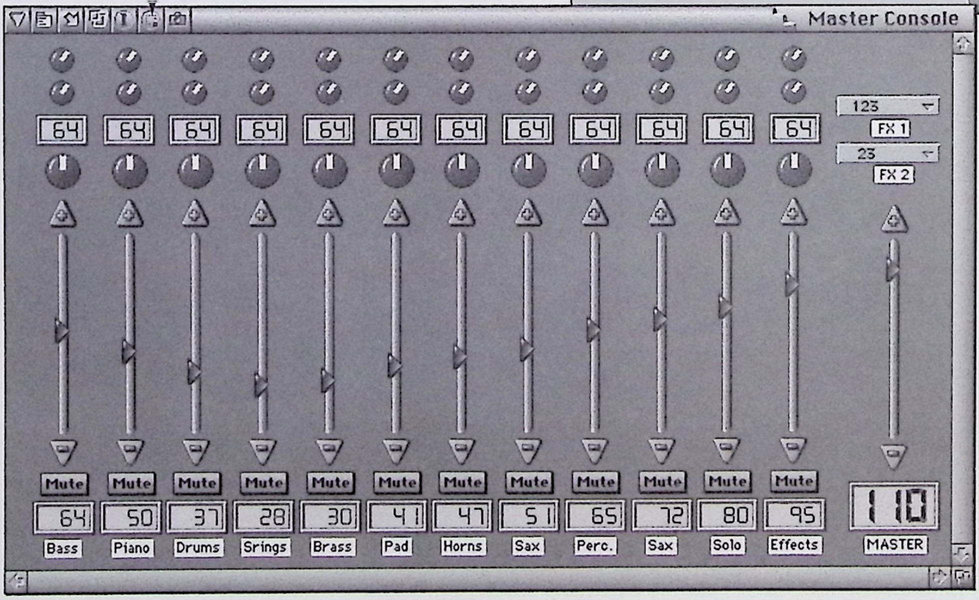
Size:
○ small
● large

Orientation:
○ horizontal
● vertical

☒ Volume 7
☒ Pan 10
☐ Modulation wheel 1
☐ Pitch bend
☐ Other...
Name:
Controller:

Source:
● MIDI Source: 01/W
○ Track: Track-1

Source data type for sliders:
○ Pitch bend
○ Notes
○ ± Mono pressure
○ Velocities
● Controller 1



Bass	Piano	Drums	Srings	Brass	Pad	Horns	Sax	Perc.	Sax	Solo	Effects	MASTER
64	50	37	28	30	41	47	51	65	72	80	95	110

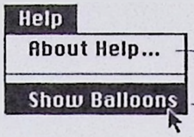
4. **Use edit mode to refine the appearance of the console as desired.** In edit mode, you can drag controls wherever you want and insert additional ones with the insert menu.

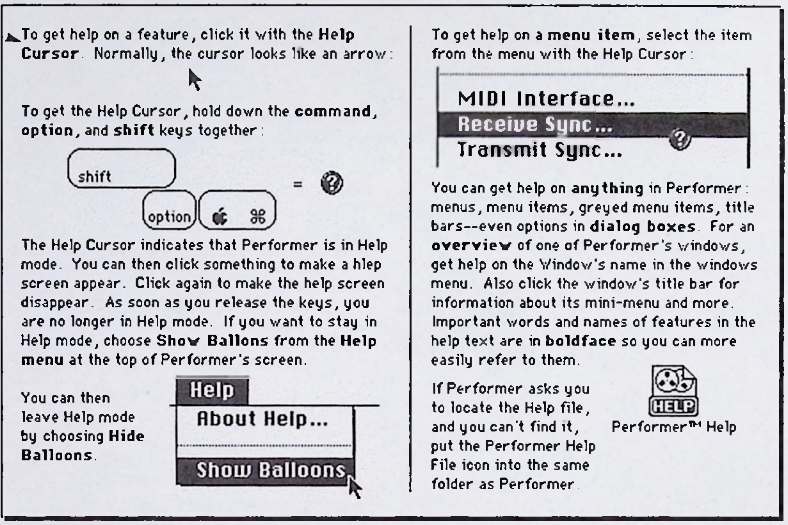
5. **Record an automated mix-down with the faders and knobs.** Volume and pan data gets recorded into the appropriate track automatically.

Using on-line help

For more information, see chapter 2, "On-Line Help" (page 27) in the Reference manual.

Hopefully, this chapter has piqued your curiosity and you now want to explore Performer even more. Performer's on-line help feature can help greatly: it provides a brief explanation for every window, menu, dialog box, button—and just about anything else you can click on. To get help, choose Show Balloons from the Help menu and then click anything with the balloon cursor to get help on it. There's even a way to get help on how to get help! Just choose About Help from the Help menu.





To get help on a feature, click it with the **Help Cursor**. Normally, the cursor looks like an arrow:

To get the Help Cursor, hold down the **command**, **option**, and **shift** keys together:

The Help Cursor indicates that Performer is in Help mode. You can then click something to make a hlep screen appear. Click again to make the help screen disappear. As soon as you release the keys, you are no longer in Help mode. If you want to stay in Help mode, choose **Show Ballons** from the **Help menu** at the top of Performer's screen.

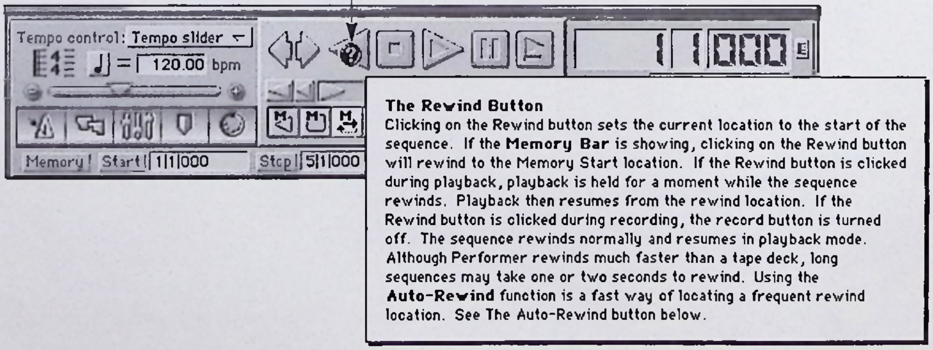
You can then leave Help mode by choosing **Hide Balloons**.

To get help on a **menu item**, select the item from the menu with the Help Cursor:

You can get help on **anything** in Performer: menus, menu items, greyed menu items, title bars--even options in **dialog boxes**. For an **overview** of one of Performer's windows, get help on the Window's name in the windows menu. Also click the window's title bar for information about its mini-menu and more. Important words and names of features in the help text are in **boldface** so you can more easily refer to them.

If Performer asks you to locate the Help file, and you can't find it, put the Performer Help File icon into the same folder as Performer.

Performer™ Help



The Rewind Button
Clicking on the Rewind button sets the current location to the start of the sequence. If the **Memory Bar** is showing, clicking on the Rewind button will rewind to the Memory Start location. If the Rewind button is clicked during playback, playback is held for a moment while the sequence rewinds. Playback then resumes from the rewind location. If the Rewind button is clicked during recording, the record button is turned off. The sequence rewinds normally and resumes in playback mode. Although Performer rewinds much faster than a tape deck, long sequences may take one or two seconds to rewind. Using the **Auto-Rewind** function is a fast way of locating a frequent rewind location. See The Auto-Rewind button below.

Chapter 8 Getting Started: Recording Your First Track

Performer™

This chapter is a brief introduction (approximately 20 minutes). These step-by-step instructions will lead you through starting Performer, recording and playing back a single track, and viewing and editing MIDI data. Working through this chapter is a good way of confirming that you have correctly set up your MIDI system.

To begin, start Performer by double-clicking the Performer program icon. If this is the very first time you are opening the program, please refer briefly to chapter 6, "Starting Performer for the First Time".

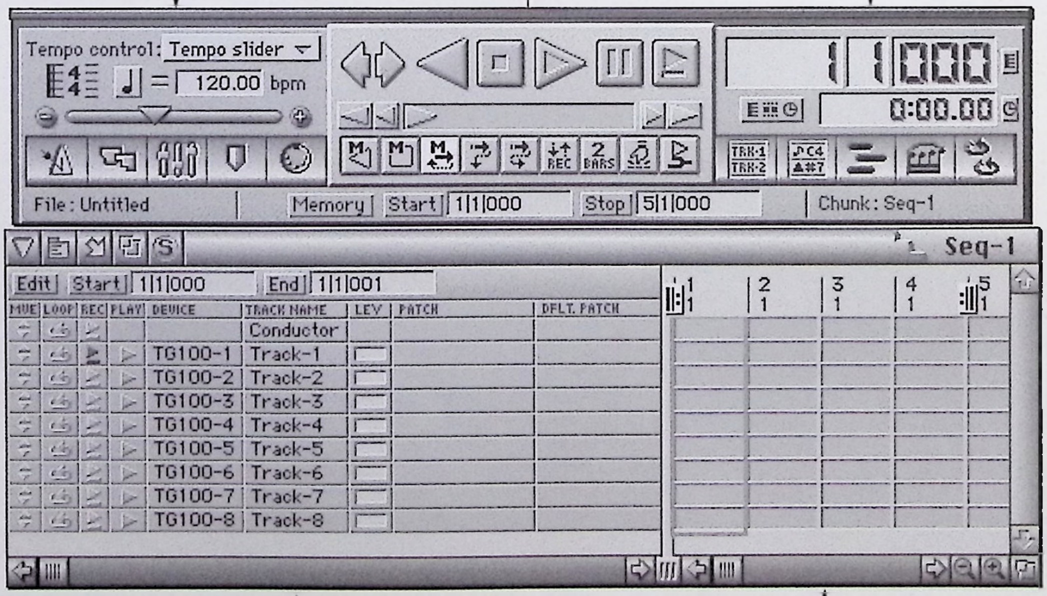
Recording a scale

After a few moments, the screen should look like what you see below. If not, choose *New* from the File menu:

Metronome

Main transport controls

Counter



Tempo control: Tempo slider

♩ = 120.00 bpm

File: Untitled

Memory

Start 1|1|000

Stop 5|1|000

Chunk: Seq-1

Edit Start 1|1|000 End 1|1|001

MUE	LOOP	REC	PLAY	DEVICE	TRACK NAME	LEV	PATCH	DFLT. PATCH
					Conductor			
				TG100-1	Track-1			
				TG100-2	Track-2			
				TG100-3	Track-3			
				TG100-4	Track-4			
				TG100-5	Track-5			
				TG100-6	Track-6			
				TG100-7	Track-7			
				TG100-8	Track-8			

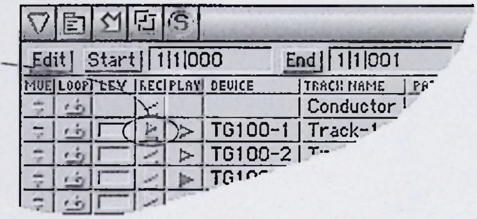
Tracks list

Tracks overview

The top portion of the screen shows the Consolidated Controls window. Across the top you see the Tempo controls, Main Transport Controls, and the Counter. Just below are buttons that open windows for Performer's main features. Underneath is the Tracks window for sequence 1 (Seq-1). These windows contain the basic controls and information you will need to record and play a sequence.

Record enabling a track

At this point, eight tracks are shown in the Tracks window. The first track is named "Track-1". (In later chapters you will learn how to rename tracks and add descriptive comments to the Tracks window). To record-enable a track, click its record button to make it black. Track-1 should already be record-enabled, as shown below. If not, click its record button.


Track 1 is record-enabled.

Setting the playback Device

At this point, Track-1 is set to play back on channel 1 of one of your MIDI devices. If you would like to change the channel, or even the device altogether, you can select the desired one easily by choosing it from the play destination pop-up menu. If you don't need to change the channel or device, you can skip this step.

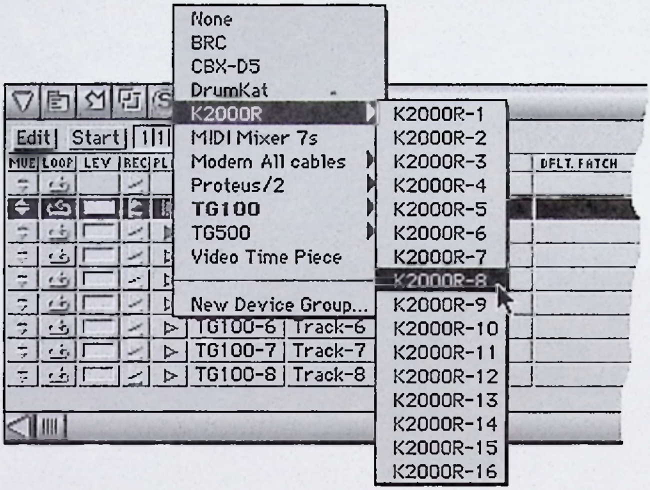
> ☛ The list of MIDI devices that appears in the play destination pop-up menu is provided by FreeMIDI. If the device you wish to use is not present in the list, see "Using Quick Setup to Add FreeMIDI Devices" on page 685 in the Performer Reference Manual.

1. **In the Tracks window, press on the Device assignment next to the Track-1 name.**

   A pop-up list of devices appears.

2. **Select the desired MIDI device and channel from the hierarchical pop-up menu.**

   In the example below, the original device was the Yamaha TG100 and the new device being selected is the Kurzweil K2000R, MIDI channel 8. This pop-up menu is a standard Macintosh hierarchical menu.

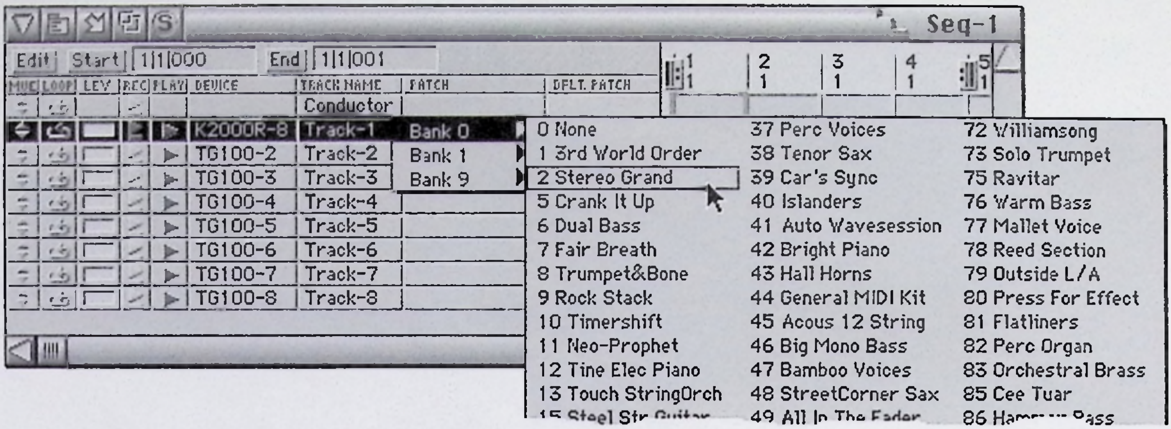

None
BRC
CBX-D5
DrumKat
K2000R
MIDI Mixer 7s
Modem All cables
Proteus/2
TG100
TG500
Video Time Piece
New Device Group...
K2000R-1
K2000R-2
K2000R-3
K2000R-4
K2000R-5
K2000R-6
K2000R-7
K2000R-8
K2000R-9
K2000R-10
K2000R-11
K2000R-12
K2000R-13
K2000R-14
K2000R-15
K2000R-16
Edit
Start
MUTE
LOOP
LEV
REC
PL
DFLT. PATCH
TG100-6
Track-6
TG100-7
Track-7
TG100-8
Track-8

Setting up a piano sound

Now let's set up a piano sound for the track. This is done by calling up a piano sound on the same MIDI device and channel that you chose in the previous step. In the example above, we chose the Kurzweil K2000R channel 8. So we would need to set up a piano sound on channel 8 on the K2000R.

For many popular MIDI devices, you can do this directly from within Performer: just choose the sound by name from the Patch column next to the track as shown in the next picture.

If you see a generic list of names ("Patch 1, Patch 2, Patch 3", etc.), Try Patch 1. Many synths have a piano sound there. Play a few notes on your controller keyboard. Do you hear a piano? If not, try a few different choices from the pop-up menu until you find one that kind of sounds like a piano. It doesn't have to be *exactly* like a piano for the purposes of this tutorial. By the way, you can replace the generic patch names with actual ones; see chapter 48, "Using PatchList Manager" (page 725) in the Reference Manual for details.


Seq-1
Edit
Start
1|1|000
End
1|1|001
MUE
LOOP
LEV
REC
PLAY
DEVICE
TRACK NAME
PATCH
DFLT. PATCH
1
1
2
1
3
1
4
1
5
1
Bank 0
Bank 1
Bank 9
0 None
1 3rd World Order
2 Stereo Grand
5 Crank It Up
6 Dual Bass
7 Fair Breath
8 Trumpet&Bone
9 Rock Stack
10 Timershift
11 Neo-Prophet
12 Tine Elec Piano
13 Touch StringOrch
37 Perc Voices
38 Tenor Sax
39 Car's Sync
40 Islanders
41 Auto Wavesession
42 Bright Piano
43 Hall Horns
44 General MIDI Kit
45 Acous 12 String
46 Big Mono Bass
47 Bamboo Voices
48 StreetCorner Sax
49 All In The Fader
72 Williamsong
73 Solo Trumpet
75 Ravitar
76 Warm Bass
77 Mallet Voice
78 Reed Section
79 Outside L/A
80 Press For Effect
81 Flatliners
82 Perc Organ
83 Orchestral Brass
85 Cee Tuar

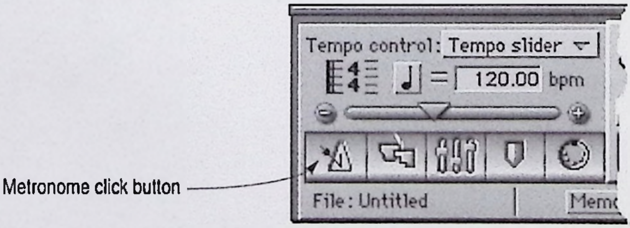
DEVICE	TRACK NAME
	Conductor
K2000R-8	Track-1
TG100-2	Track-2
TG100-3	Track-3
TG100-4	Track-4
TG100-5	Track-5
TG100-6	Track-6
TG100-7	Track-7
TG100-8	Track-8

Setting a metronome click and tempo

Performer organizes MIDI data into measures, beats, and ticks (there are 480 ticks per quarter note). To ensure that your music lines up with the beat correctly, always listen to Performer's built-in metronome while recording:

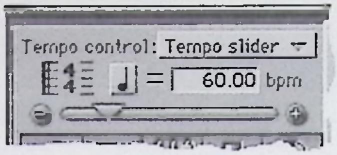
1. **Make sure the Metronome click button is turned on.**

   On a color screen the inset portion of the button turns yellow when the click is on. Try clicking the button a few times to toggle it back and forth so you can see the difference between off and on.


Tempo control: Tempo slider
4
4
120.00 bpm
File: Untitled
Mem
Metronome click button

2. **Drag the Tempo Slider to 60 bpm.**

   Performer can handle a wide range of tempos and tempo changes. For now, simply set a steady tempo of 60 beats per minute. You can click on the + and - buttons to make fine adjustments. Alternately, you could click the tempo marking in the box, type in "60", and press return to confirm your typing.



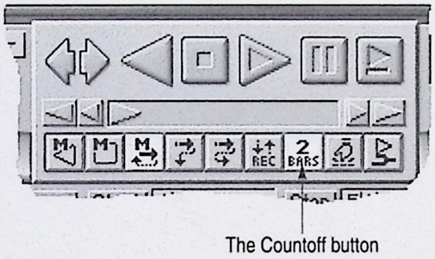
Tempo control: Tempo slider

60.00 bpm

Setting a countoff

The final step to prepare for recording is to set a couple of countoff bars. A countoff helps you play in tempo, and gives you time to get to your MIDI keyboard after pressing Record in Performer.

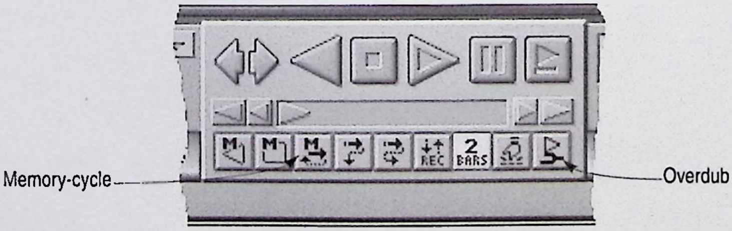
- Click on the Countoff button below the Transport controls.



A Countoff of two bars is provided, with a metronome click every quarter note. (If you want to change the number of countoff bars, double-click the button to open a dialog box that lets you do so.)

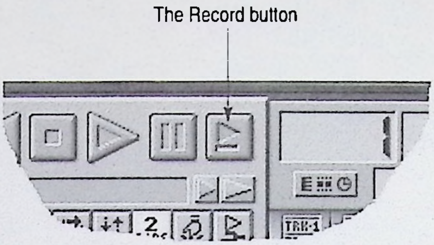
Turning off Memory-cycle and Overdub

The Memory-cycle button causes Performer to loop a region of the music indefinitely. This extremely useful feature is explored later. For now, let's make sure that it is off, as shown below. The same goes for Overdub record.



Recording a scale

You are now ready to record. Read over the next couple of steps beforehand, and make sure your controller keyboard is turned on and set up to send MIDI. When you're ready:



1. **Click the Record button in the Consolidated Controls window.**

   The two bars of countoff will begin as soon as the Record button is pressed. Count the eight beats of introduction while you move to your controller keyboard and prepare to play.

2. **Play an ascending C major scale, starting on Middle C and ending on the C an octave above.**

   Use quarter notes, one per metronome click.

3. **When you're finished, click on the Stop button.**

Performer will stop recording. Note that the counter has advanced, and that the position bar arrow has moved to the far right, indicating that you are currently at the end of your sequence.

If you make a mistake, don't panic. Press the Rewind button to return to the start of the sequence, then repeat the previous three steps.

Playing back your sequence

To hear what you just recorded:

1. **Click on the Rewind button in the Controls window.**

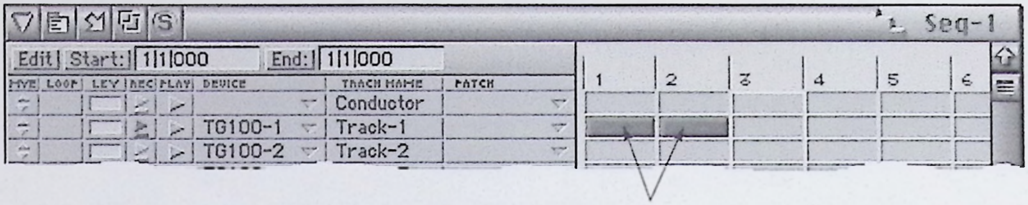
   This returns Performer to the start of the sequence. Note that the Counter and position bar are reset to their starting values.

2. **Click on the Play button.**

   You should hear the scale play back on the assigned keyboard(s) or sound modules. If you don't hear anything, turn to "Problems" on page 99.

Opening an Event Editing window

You have just recorded a MIDI sequence, that is, a string of MIDI commands that exactly describe your performance. The Tracks Overview shows the data that you have just recorded into Track-1:



MVE	LOOP	KEY	REC	PLAY	DEVICE	TRACK NAME	PATCH
						Conductor	
					TG100-1	Track-1	
					TG100-2	Track-2	

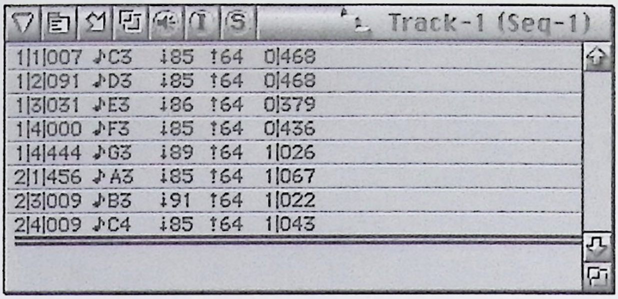
The first few measures of Track-1 now contain the scale you just played. Double-click any segment to open the Event List window of the track, which shows each note that you played.

Performer allows you to view and edit these MIDI 'events' directly by opening an Event Editing window for a recorded track. Each track can be viewed in one of four Event Editing windows: the Event List window, the Graphic Editing window, the Notation editing window, or the QuickScribe notation window. In this example we'll use the Event List window. For detailed information on the other windows, refer to their respective chapters, starting with *chapter 20, "The Event List Window" (page 257)* in the Performer Reference Manual.

To see the data you have just recorded:

- Double-click on one of the filled-in track segments for Track-1 in the Tracks Overview. Alternately, you can double-click the track name *Track-1* in the Tracks List.

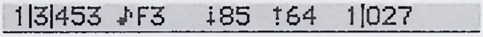
A new window will appear, looking more or less like this:



```
1|1|007 ♪C3   ↓85  ↑64  0|468
1|2|091 ♪D3   ↓85  ↑64  0|468
1|3|031 ♪E3   ↓86  ↑64  0|379
1|4|000 ♪F3   ↓85  ↑64  0|436
1|4|444 ♪G3   ↓89  ↑64  1|026
2|1|456 ♪A3   ↓85  ↑64  1|067
2|3|009 ♪B3   ↓91  ↑64  1|022
2|4|009 ♪C4   ↓85  ↑64  1|043
```

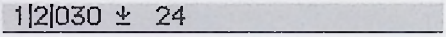
Setting the View Filter

MIDI-equipped keyboards transmit a wide variety of MIDI data. Your event list should contain the notes you just played, indicated by a small note symbol:



```
1|3|453 ♪F3   ↓85  ↑64   1|027
```

You may see additional events, such as aftertouch events:



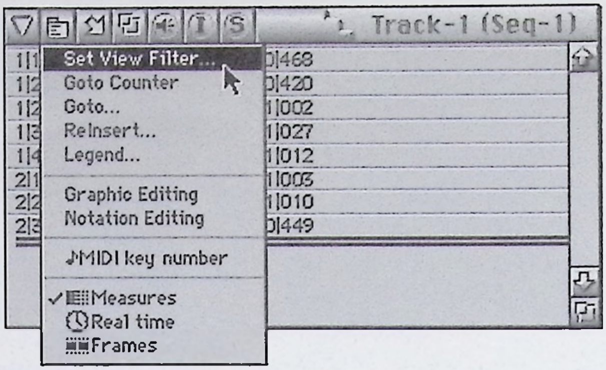
```
1|2|030 ± 24
```

Later in this manual, you'll learn how to set the Input Filter to filter out aftertouch data during recording if you don't want to record it.

If your event list contains anything other than note events, follow these steps to temporarily hide the other data:

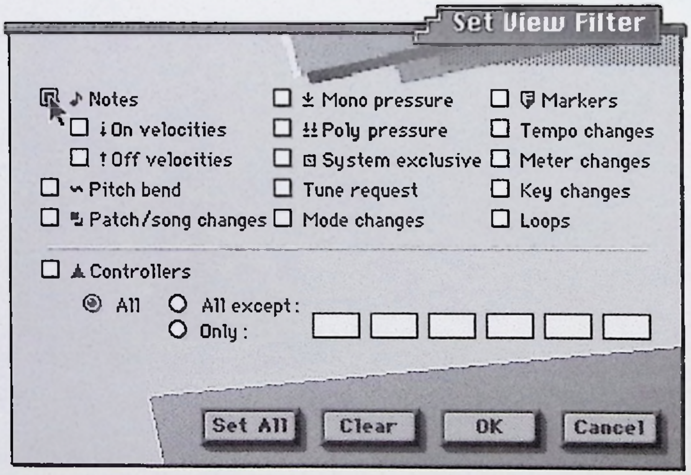
1. **Select Set View Filter from the Event List window mini-menu.**

   Place the pointer on the mini-menu icon at the top of the Event List window and press the mouse. Still pressing, slide the mouse pointer down until the option 'View Filter' is highlighted, then release the mouse.


Track-1 (Seq-1)
Set View Filter...
Goto Counter
Goto...
Reinsert...
Legend...
Graphic Editing
Notation Editing
MIDI key number
✓ Measures
Real time
Frames

2. **Option-click on the Notes check box.**

   This is a shortcut for deselecting everything but Note events for viewing: hold down the option key and click on the small box next to the Notes symbol.

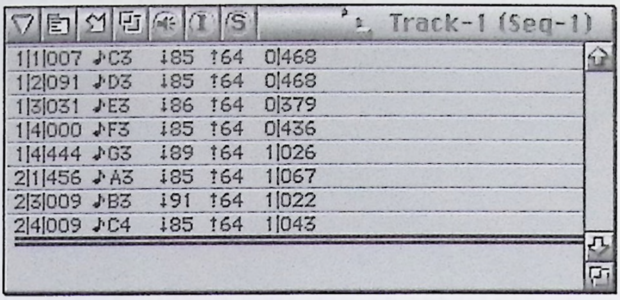

Set View Filter
Set All
Clear
OK
Cancel

☐ Notes
  ☐ On velocities
  ☐ Off velocities
☐ Pitch bend
☐ Patch/song changes
☐ Mono pressure
☐ Poly pressure
☐ System exclusive
☐ Tune request
☐ Mode changes
☐ Markers
☐ Tempo changes
☐ Meter changes
☐ Key changes
☐ Loops

☐ Controllers
  ● All ○ All except:
  ○ Only:

3. **Click OK to confirm your choice.**

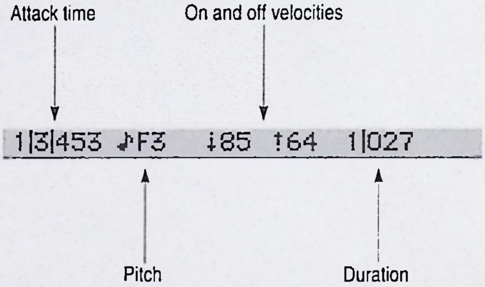
Now you should only see Note events in your event list:



```
1|1|007 ♪C3   ↓85  ↑64   0|468
1|2|091 ♪D3   ↓85  ↑64   0|468
1|3|031 ♪E3   ↓86  ↑64   0|379
1|4|000 ♪F3   ↓85  ↑64   0|436
1|4|444 ♪G3   ↓89  ↑64   1|026
2|1|456 ♪A3   ↓85  ↑64   1|067
2|3|009 ♪B3   ↓91  ↑64   1|022
2|4|009 ♪C4   ↓85  ↑64   1|043
```

Editing an event

The information for a Note event is displayed as follows:



```
1|3|453 ♪F3   ↓85  ↑64   1|027
```

The Attack Time is the time, displayed here in measures | beats | ticks, at which the note is played. This note begins in the first measure, third beat, and 453rd tick (there are 480 ticks in a beat).

The Pitch of the note is indicated by its letter name and octave number. This note is an F3, that is, the F just above middle C.

The Duration is displayed in quarter notes and ticks. Like attack times, there are 480 ticks per quarter note; a value of 1 | 027 ticks is just a little longer than a quarter note.

You may directly change any of these values. For example, to move your first note to the exact start of the sequence:

1. **Double-click on the attack time of the first note event.**

   The event is highlighted and the attack time field 'pops up'.

2. **Click on the 'ticks' field and type in *000*.**

3. **Press the Return key to confirm your change.**

   The note event is redisplayed with its new attack time.

Editing a group of events

While directly editing events in an Event List window allows precise, flexible control over your sequence, editing notes one at a time can be time consuming when editing dozens of notes. The commands in the Edit and Region menus let you edit whole sections, tracks, or sequences at once, while maintaining precise control over the final results. For example, we can use the Quantize command from the Regions menu to align the notes of our scale exactly on the beat:

1. **Click in the Tracks window to activate it.**

   The Tracks window comes to the front.

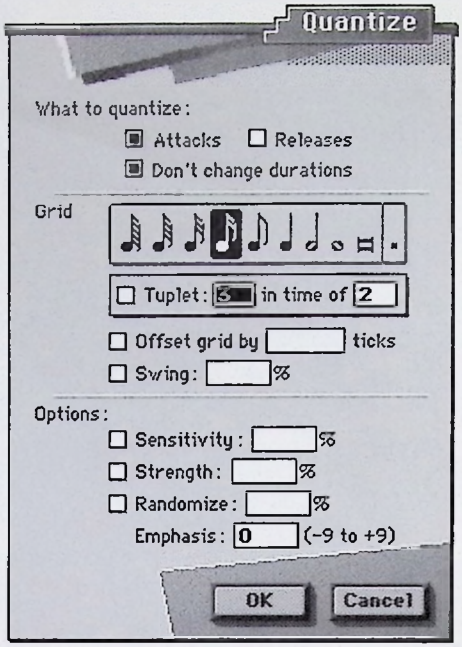
2. **Click Track-1 once to highlight it.**

   This selects Track-1 for editing. Alternately, you could also drag over the filled-in track segments in the Tracks Overview; they will highlight.

3. **Double-click on the Edit button above the track names.**

   This is a shortcut to set the Start and End times in the Edit bar at the top of the Tracks window to the beginning and end of your sequence, respectively. You can alternatively set these times manually, by clicking on the Start and End time fields and typing in the desired values.

4. **Choose Quantize from the Region menu.**



What to quantize:

☒ Attacks ☐ Releases

☒ Don't change durations

Grid

☐ Tuplet: 3 in time of 2

☐ Offset grid by ticks

☐ Swing: %

Options:

☐ Sensitivity: %

☐ Strength: %

☐ Randomize: %

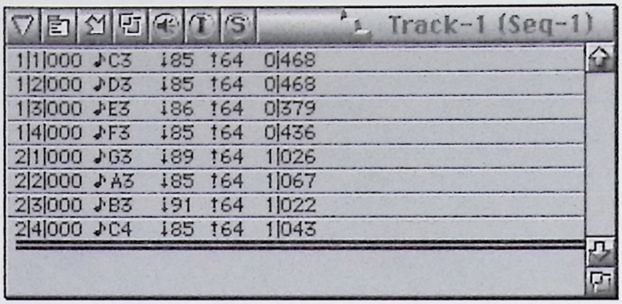
Emphasis: 0 (-9 to +9)

The Quantize dialog box appears. There is a full description of this box and how it works in chapter 27, "Region Commands 1" (page 409). For now, simply select a quarter note as the rhythmic value:

1. **Click on the quarter note icon.**

2. **Click on the OK button to confirm your choice.**

   Performer will process the command and remove the dialog box. At this point, if you examine the Event List window you will note that the Attack Times are all precisely on the beat, i.e. the tick fields all show '000':



```
Track-1 (Seq-1)
1|1|000 ♪C3   ↓85  ↑64  0|468
1|2|000 ♪D3   ↓85  ↑64  0|468
1|3|000 ♪E3   ↓86  ↑64  0|379
1|4|000 ♪F3   ↓85  ↑64  0|436
2|1|000 ♪G3   ↓89  ↑64  1|026
2|2|000 ♪A3   ↓85  ↑64  1|067
2|3|000 ♪B3   ↓91  ↑64  1|022
2|4|000 ♪C4   ↓85  ↑64  1|043
```

Use the Rewind and Play buttons on the Controls window to play back your sequence again. The notes of the scale will play precisely on the beats.

Saving your sequence

The sequence you have recorded and edited is currently stored in the Random Access Memory (or RAM) of your computer. You should make a permanent copy of any work you do with the Save and Save As commands on the File menu:

1. **Select Save As from the File menu.**

   A standard Macintosh file dialog box appears.

2. **Type a name for your file.**

   Always try to use descriptive names, so you can identify your files later. "Simple Scale" might be a good name for this file.

3. **If necessary, use the Desktop and Eject buttons to select the correct disk on which to save.**

   If you are not sure how to do this, please review your Macintosh manual.

4. **Click the Save button to save the file.**

Problems

If you follow the steps described in this chapter you should be able to record, view, and edit a simple sequence. If, for some reason, you have a problem, don't panic. Try to pinpoint the problem with these steps:

If Performer won't run, or doesn't recognize the key disk, or displays a Macintosh System Error message:

☛ Turn to the Appendix C. "Troubleshooting FreeMIDI" in this booklet for more suggestions and instructions on how to contact Mark of the Unicorn's Customer Support program.

If Performer runs, but doesn't record (i.e. nothing appears in the Event List window):

1. **Select Quit from File menu.**

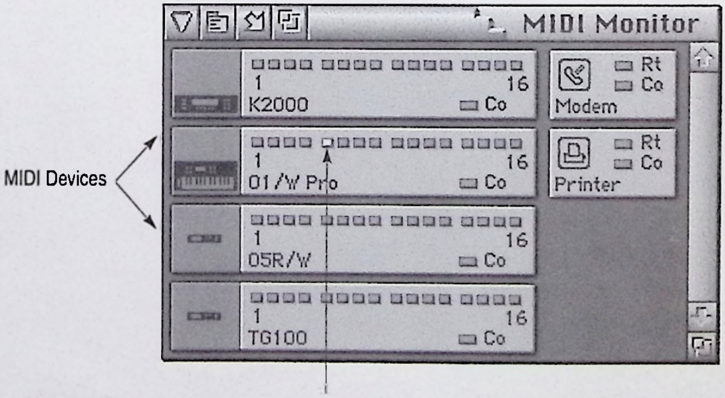
2. **Shut down your Macintosh.**

3. **Make sure that your MIDI equipment is on and correctly set up, and that the MIDI cables are working and firmly plugged in to the equipment.**

   To test your MIDI cables, try a simple hook up between two MIDI modules, or exchange input and output cables.

4. **Start the Macintosh again, insert your Performer disk(s) if necessary, open a new file, and open the MIDI Monitor window.**

   The MIDI Monitor window shows incoming MIDI data from your MIDI devices.



This indicator shows that MIDI data is being received from the Korg 01/W Pro on MIDI channel 5. If none of these indicators blink when you play your MIDI controller, then something is wrong with the cables, MIDI interface, FreeMIDI settings, or other connections.

5. **Play notes on your MIDI controller and watch the MIDI Monitor.**

   If no indicators blink, then Performer is not receiving any MIDI data, which probably means that something is wrong with the MIDI cables, MIDI interface, or other connection. If an indicator does blink, then you are receiving data successfully.

6. **Go through this chapter again.**

   Follow each step carefully; it's easy to miss something the first time through a program of this scope.

If you can record a track and view the notes in the event list, but can't get your sequence to play back:

☛ Check the volume and MIDI setting for your MIDI keyboard and/or sound module. Make sure the playback destination in the Tracks window in Performer corresponds with the channel setting on your MIDI device, otherwise the MIDI information will not reach your synth.

Further troubleshooting

If these steps don't help, you almost certainly have a problem with your MIDI interface, cables, or keyboard. Check with the dealer or manufacturer for help on testing the hardware. Appendix C, "Troubleshooting FreeMIDI" in the Performer Reference manual contains more suggestions and instructions on how to contact Mark of the Unicorn's Customer Support program.

Chapter 9 Tutorial: Building a Sequence

What's in this tutorial

In this tutorial, you will:

- Cycle-record a drum loop and use the Graphic Editing window during recording
- Apply a groove to the drum loop
- Step-record a keyboard part
- Insert a bass line in the notation window by hand
- Mix the sequence with a fader console
- Build a song out of several sequences

The tutorial will probably take about an hour and a half. You can stop at any time by choosing Quit from the File menu.

Tutorial checklist

To make the tutorial as clear as possible, we assumed the following:

- You've successfully completed the entire installation section of this guide, including the setup of your FreeMIDI studio configuration.
- You have a MIDI keyboard (or other MIDI controller) and a multi-timbral MIDI setup. If you'd like a further explanation of this, see "Categorizing your MIDI setup: how many notes can you play at once?" on page 104.
- You know how to call up sounds in your MIDI gear, including a drum kit.
- If you are using your controller keyboard as a sound source, you have turned off *Local Control.* If you'd like a further explanation of this, see "Disabling Local Control in your MIDI controller keyboard" on page 104.
- It helps if you have gone through the previous two chapters, but they are not required.

Categorizing your MIDI setup: how many notes can you play at once?

Perhaps the most fundamental concept of MIDI sequencing is that the sequencer itself produces no sound whatsoever. Instead, the sequencer triggers synthesizers, which produce the actual sound. A sequencer just records and plays back performance information: *when* notes were played, *what* notes were play, *how hard* they were struck, *how long* they were held down, and so on. This is one of the reasons why sequencing is so powerful. It gives you incredible flexibility in working with the instruments and sounds in your music.

So the maximum number notes you can play at one time when sequencing in Performer depends on your MIDI hardware.

Only the most basic MIDI synthesizers are limited to one note at a time, and fortunately, this type of instrument is a thing of the past for the most part. An instrument that can only play one note at a time is referred to as being *monophonic*.

Today, most keyboards, sound modules and other types of synthesizers (often referred to as a *sound sources*) can play several notes at once. For example, you can play a chord on them consisting of 3 or more notes at one time. A device that can do this is referred to as *polyphonic*. Keyboards and sound modules produced in the late 1980's could typical play up to eight notes at a time (*eight note polyphony*). Today, affordable synths are 32-note and even 64-note polyphonic.

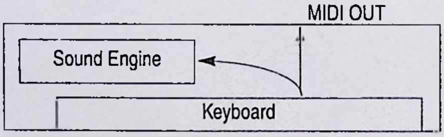
Most of today's synths are also *multi-timbral*, which means that they can play different types of sounds at the same time. For example, you may have a sound module that can play drums, bass, piano, guitar, sax, synth pad, and a solo instrument all at once. Many devices can play up to 16 different sounds at once (one per MIDI channel).

To take full advantage of Performer's power, a multi-timbral MIDI setup is highly recommended. Even a single general MIDI sound module such as the Yamaha TG100, Korg 05R/W, or Roland Sound Canvas gives you an entire orchestra at your fingertips in Performer.

Disabling Local Control in your MIDI controller keyboard

Local Control is a setting found on just about every MIDI keyboard. It's easier to understand what local control does if you first understand the basic architecture of a keyboard synthesizer.

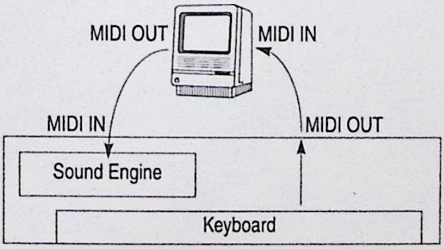
Most keyboard synthesizers actually consist of two separate components as shown below. The keyboard controller sends performance information to both the built-in synthesizer and the MIDI OUT port.



It's easy to think of them as being one and the same, but actually, the sound engine inside the synth is separate from the keyboard. In fact, many synth manufacturers ship a rack-mountable version of their popular keyboards that is simply the sound engine by itself, without the keyboard. Often the unit fits a single rack space—sometimes even a half-rack space.

Local Control is the setting that connects the keyboard to the sound engine. When Local Control is on, the keys on the keyboard trigger notes in the sound engine. When Local Control is turned off, this connection is temporarily severed, and the keys no longer trigger sounds within the synthesizer.

When you are using your keyboard as a sound source as well as a controller with Performer, turn Local Control off. (Consult the manual; it may be called "Local On" or "Local Off".) Don't worry, though. You'll still be able to trigger sounds via Performer's Patch Thru feature in the Basics menu, which echoes controller keyboard input to any sound source in your MIDI studio.



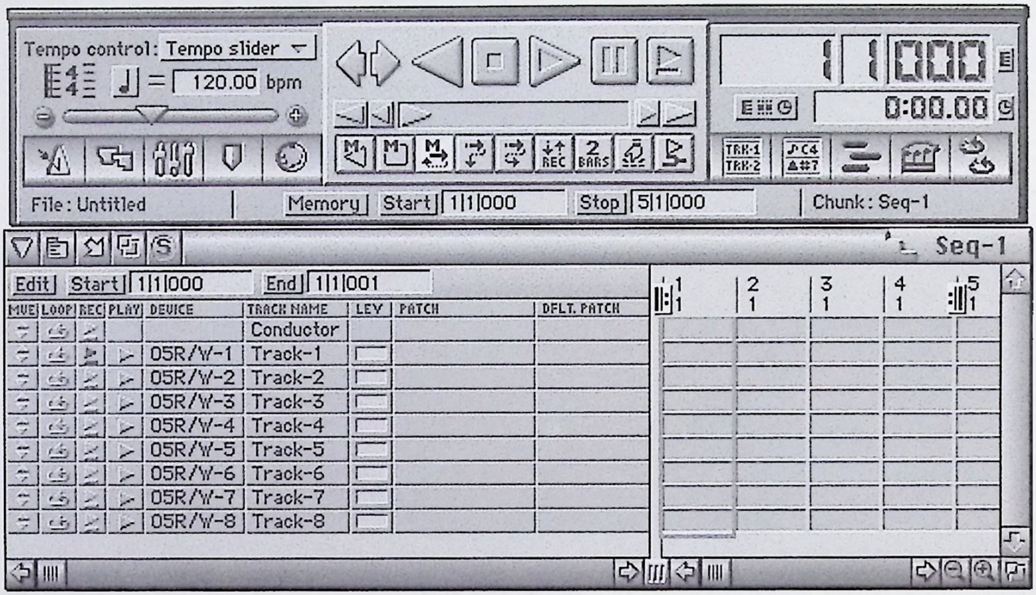
Open a new file

Lets begin with a new, empty Performer file.

1. **If Performer is not currently running, double-click its icon to launch the program.**

2. **If Performer is currently running, choose New from the File menu.**

   If a file is currently open, you'll have to close it first by choosing Close from the File menu.



Tempo control: Tempo slider

120.00 bpm

1|1|000

0:00.00

File: Untitled

Memory Start 1|1|000 Stop 5|1|000

Chunk: Seq-1

Seq-1

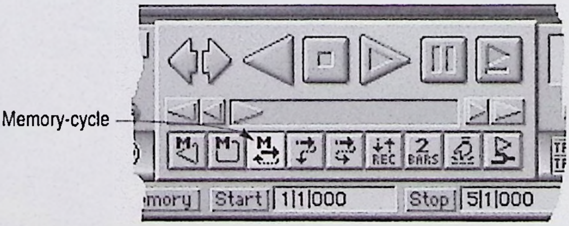
Edit Start 1|1|000 End 1|1|001

MUTE	LOOP	REC	PLAY	DEVICE	TRACK NAME	LEV	PATCH	DFLT. PATCH
					Conductor			
				05R/W-1	Track-1			
				05R/W-2	Track-2			
				05R/W-3	Track-3			
				05R/W-4	Track-4			
				05R/W-5	Track-5			
				05R/W-6	Track-6			
				05R/W-7	Track-7			
				05R/W-8	Track-8			

Set up memory-cycle recording

Memory-cycle lets you build a section of music by loop recording. We are going to build a two-bar drum loop.

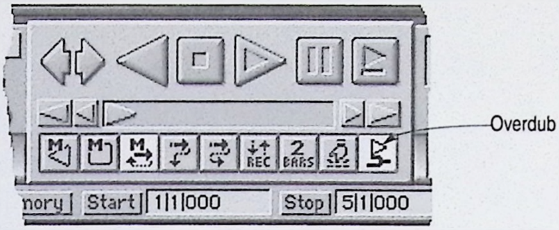
1. **If it isn't already highlighted, click the Memory-cycle button to highlight it.**



mory Start 1|1|000 Stop 5|1|000

2. **Click the Overdub Record button to highlight it.**

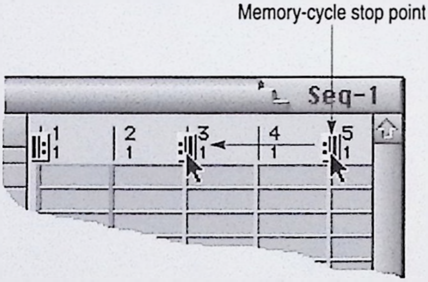
   Overdub record mode causes newly recorded material to merge with data that is already in the track instead of erasing and replacing it.



Start 1|1|000 Stop 5|1|000

3. **Drag the Memory-cycle stop point to bar 3 in the Tracks Overview.**

   The "tab" snaps to barlines as you drag, so you don't have to be exact. Performer will now loop the first two bars indefinitely.

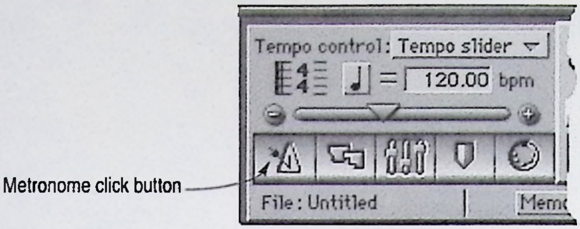


Set up a Metronome click

When you first record in real time into Performer, you need a metronome click so that you can play along with the measures and beats in Performer. Actually, it is possible to record without a click and afterwards line up the beats and barlines with your performance. For more information, see chapter 36, "The Record Beats Command" (page 591) in the Reference Manual. But for building our drum loop now, let's play to a click.

1. **Make sure the Metronome click button is turned on.**

   On a color screen the inset portion of the button turns yellow when the click is on. Try clicking the button a few times to toggle it back and forth so you can see the difference between off and on.


Metronome click button

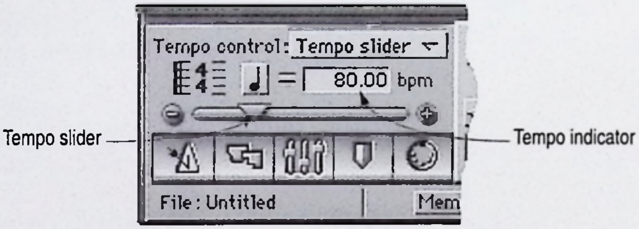
Tempo control: Tempo slider

120.00 bpm

File : Untitled

2. **Set the tempo slider to a comfortable recording tempo.**

   A great thing about MIDI sequencing is that you can record at a slow tempo and then move up to full speed afterwards. Let's set the tempo slider to about 80 bpm (beats per minute).


Tempo slider
Tempo indicator

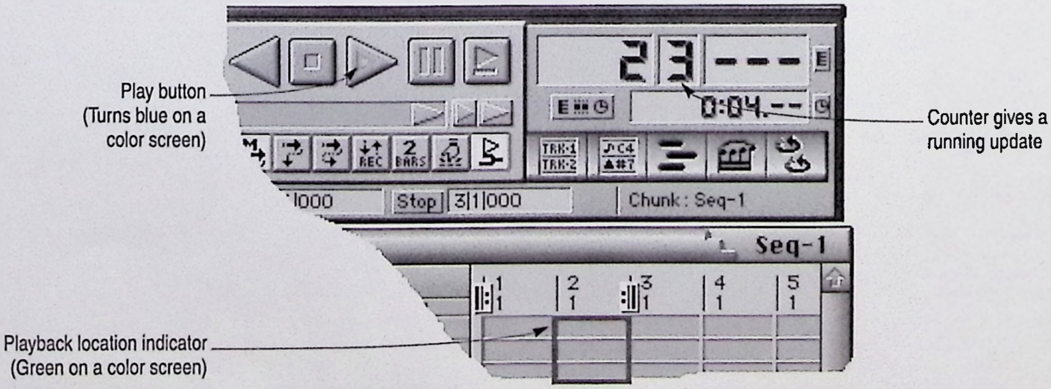
Tempo control: Tempo slider

80.00 bpm

File : Untitled

3. **To test the metronome click, press the play button and listen for the click sound produced by the Macintosh's internal speaker.**

   Performer begins to play, looping the first two measures. The main counter gives you a running update, and the playback location indicator scrolls in the Tracks Overview. Play for as long as you'd like.

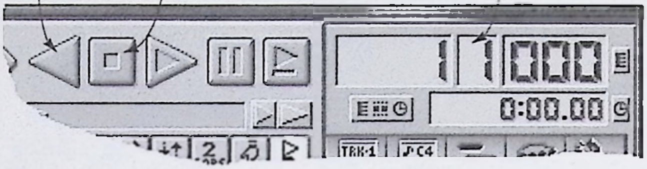

Play button
(Turns blue on a color screen)
Counter gives a running update
Playback location indicator
(Green on a color screen)
2 BARS
REC
Seq-1

Stop 3|1|000

Chunk : Seq-1

4. **Press the Stop button to stop playback and press Rewind to return to the beginning of the sequence.**

   When you are done with this step, the Counter should read measure 1, beat 1 as shown below.



Rewind button

Stop button

After rewind, the Counter returns to measure 1.

5. **If you did not hear the internal speaker click during playback, or if you feel that it won't be loud enough during recording, see the side-bar "Setting up a MIDI click".**

   Performer cannot produce an internal speaker click on some Macintosh system configurations.

Setting up a MIDI click

In addition to Performer's internal speaker click, you can use a drum machine, sampler, or other sound source to generate a click sound of your choice.

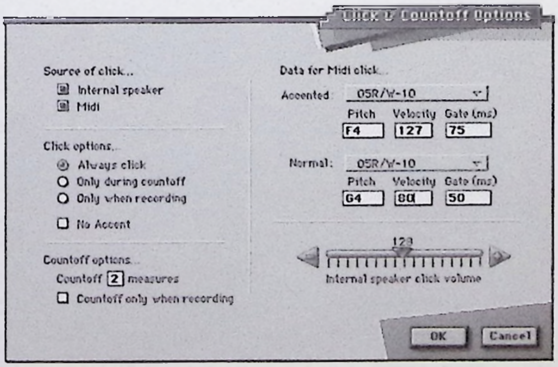
To set up a MIDI click:

1. **In the Tracks window, record-enable any track that is currently assigned to the drum machine, sampler, or other device that you'd like to use for the click sound.**

   If you need help with this step, see "Record enabling a track" on page 88 and "Setting the playback Device" on page 88.
2. **From the Basics menu choose Click and Countoff Options.**
3. **Check the MIDI check box at the top of the window.**
4. **On the right, choose the device you would like to use for the accented click from the pop-up menu provided.**

   The accented click falls on the downbeats of measures.
5. **Double-click in the Pitch box to select it and either type the desired note or simply play the desired note on your controller keyboard.**
6. **Set the note-on velocity (0-127) and gate (duration in milliseconds) as desired.**
7. **Make the Normal click settings in the same fashion.**

   The Normal click falls on beat boundaries within each measure.
8. **Click OK.**



Click & Countoff Options

Source of click...
☒ Internal speaker
☒ Midi

Click options...
● Always click
○ Only during countoff
○ Only when recording
☐ No Accent

Countoff options...
Countoff 2 measures
☐ Countoff only when recording

Data for Midi click...
Accented: 05R/W-10
Pitch F4 Velocity 127 Gate (ms) 75
Normal: 05R/W-10
Pitch G4 Velocity 80 Gate (ms) 50

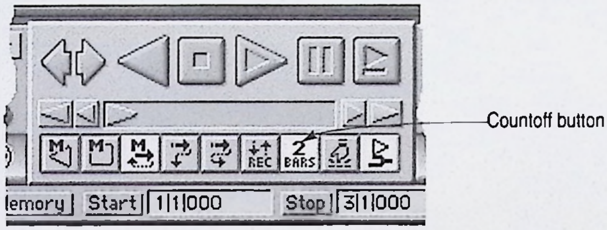
128
Internal speaker click volume

Set up a one bar countoff

Performer can give you a countoff before you begin recording, just like a conductor would, to get you into the tempo before the first downbeat. In fact, as you probably know, it's almost impossible to play in time with the first downbeat without a countoff.

Performer defaults to giving you a two-bar countoff. But we are recording at a fairly slow tempo, and we don't want to have to wait through a full two bars, so let's change the countoff to one bar.

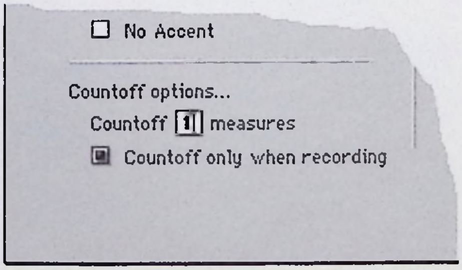
1. **Click the Countoff button once to turn it on.**



2. **Double-click the Countoff button to open the Click and Countoff Options dialog box.**

   For a full picture of this dialog box, see the picture that accompanies "Setting up a MIDI click" on page 108.

3. **In the Countoff Options section, change the 2 in the text box to a 1.**



☐ No Accent

Countoff options...

Countoff [1] measures

☒ Countoff only when recording

4. **Check the "Countoff only when recording" option.**

   This option causes Performer to skip the countoff when you click the Play button.

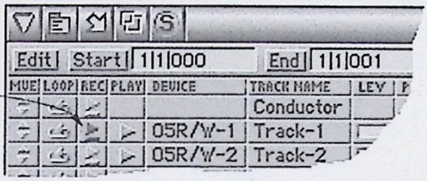
5. **Click OK to confirm the new settings.**

Set up a track for recording

Let's set up Track-1 for recording the drum loop.

1. **Make sure that Track-1 is record-enabled.**

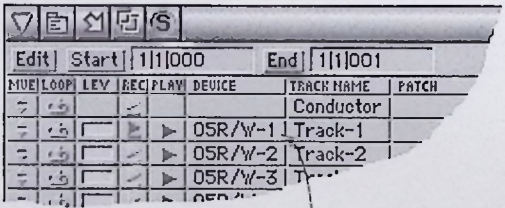
   In a new Performer file, Track-1 is record-enabled by default. If for some reason it is not, click its record button so that it is red (or black on a black and white screen).


Edit
Start
1|1|000
End
1|1|001
MUE
LOOP
REC
PLAY
DEVICE
TRACK NAME
LEV
Conductor
05R/W-1
Track-1
05R/W-2
Track-2

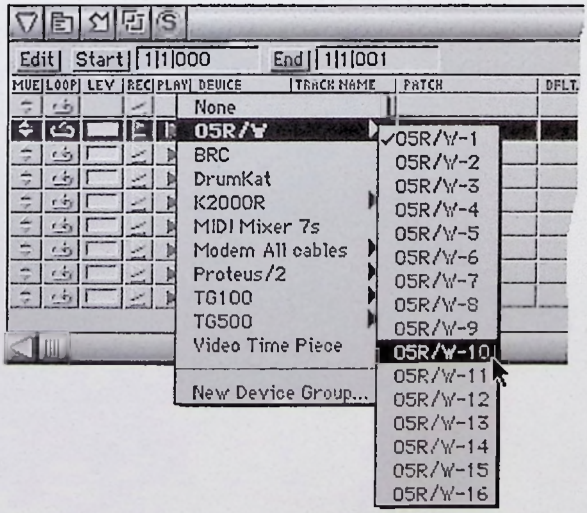
Record-enable button

2. **Choose a sound source that can produce a drum kit from the pop-up menu in the Device column next to Track-1.**

   Press on the current device assignment to open the pop-up menu. Choose your drum machine, sampler, or other device. On many multi-timbral synthesizers and sound modules, the drum kits can be found on MIDI channel 10.


Edit
Start
1|1|000
End
1|1|001
MUE
LOOP
LEV
REC
PLAY
DEVICE
TRACK NAME
PATCH
Conductor
05R/W-1
Track-1
05R/W-2
Track-2
05R/W-3

Press here to open a pop-up menu of devices similar to the ones shown on the right. Of course, your list of devices will be different than what is shown. The list of devices is provided by FreeMIDI.


Edit
Start
1|1|000
End
1|1|001
MUE
LOOP
LEV
REC
PLAY
DEVICE
TRACK NAME
PATCH
DFLT.
None
05R/W
BRC
DrumKat
K2000R
MIDI Mixer 7s
Modem All cables
Proteus/2
TG100
TG500
Video Time Piece
New Device Group...
✓05R/W-1
05R/W-2
05R/W-3
05R/W-4
05R/W-5
05R/W-6
05R/W-7
05R/W-8
05R/W-9
05R/W-10
05R/W-11
05R/W-12
05R/W-13
05R/W-14
05R/W-15
05R/W-16

3. **Make sure there is a drum kit currently playing on the device and channel that you chose.**

   First, check in the Patch column next to the track. If you see sounds listed by name similar to Figure 9-1 below, choose a drum kit. If you see a generic list of names ("Patch 1, Patch 2, Patch 3", etc.), don't choose anything for now. Instead, set up a drum kit manually using the front panel controls on the MIDI device itself. Make sure you set up the drum kit on the same MIDI channel as the one you've assigned to Track-1 in Performer. By the way, you can replace the generic patch names with actual ones; see chapter 48, "Using PatchList Manager" (page 725) in the Reference Manual for details.

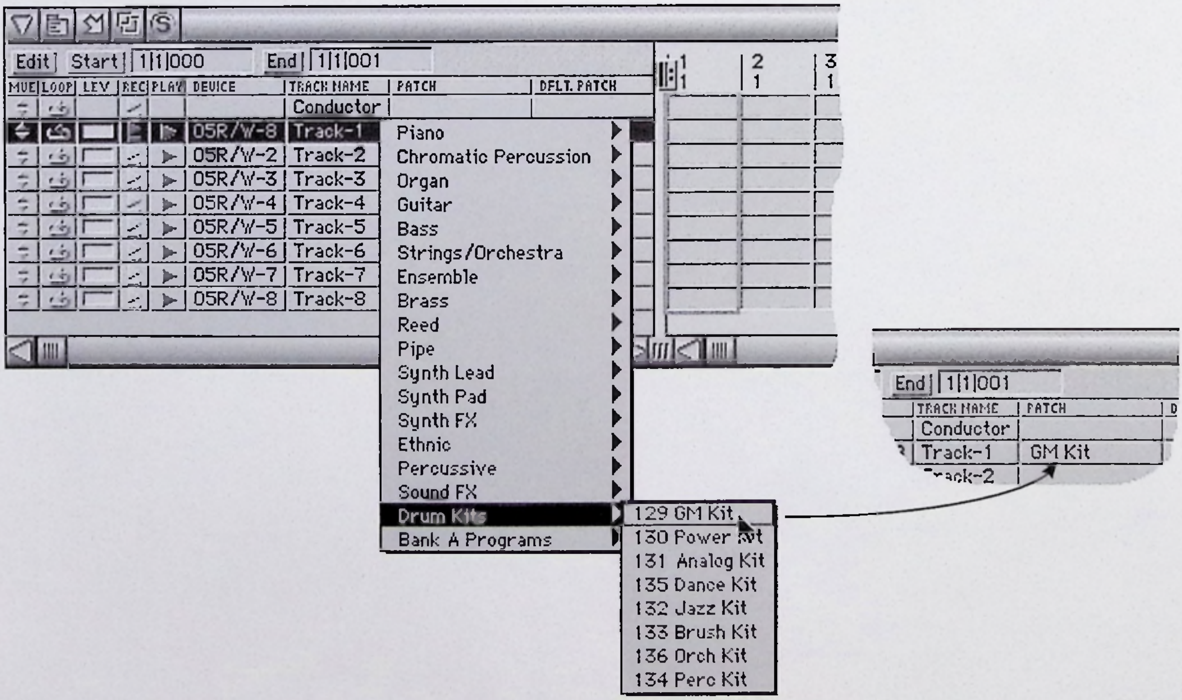
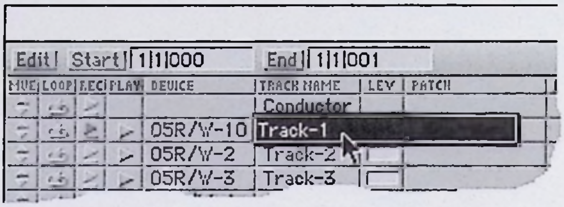

Edit
Start
1|1|000
End
1|1|001
MUE
LOOP
LEV
REC
PLAY
DEVICE
TRACK NAME
PATCH
DFLT. PATCH
Conductor
05R/W-8
Track-1
05R/W-2
Track-2
05R/W-3
Track-3
05R/W-4
Track-4
05R/W-5
Track-5
05R/W-6
Track-6
05R/W-7
Track-7
05R/W-8
Track-8
Piano
Chromatic Percussion
Organ
Guitar
Bass
Strings/Orchestra
Ensemble
Brass
Reed
Pipe
Synth Lead
Synth Pad
Synth FX
Ethnic
Percussive
Sound FX
Drum Kits
Bank A Programs
129 GM Kit
130 Power Kit
131 Analog Kit
135 Dance Kit
132 Jazz Kit
133 Brush Kit
136 Orch Kit
134 Perc Kit
1
1
2
1
3
1
End
1|1|001
TRACK NAME
PATCH
Conductor
Track-1
GM Kit
Track-2

Figure 9-1: Choosing a drum kit for the drum track.

4. **Rename Track-1 by option-clicking the name to pop-edit it.**

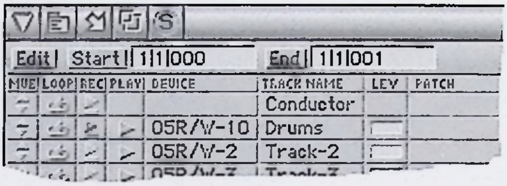
   Type in the name "Drums" and then press the return key to confirm your typing.



Edit | Start | 1|1|000 End | 1|1|001

MUTE	LOOP	REC	PLAY	DEVICE	TRACK NAME	LEV	PATCH
					Conductor		
				05R/W-10	Track-1		
				05R/W-2	Track-2		
				05R/W-3	Track-3		

Option-click a track name to pop-edit the name.



Edit | Start | 1|1|000 End | 1|1|001

MUTE	LOOP	REC	PLAY	DEVICE	TRACK NAME	LEV	PATCH
					Conductor		
				05R/W-10	Drums		
				05R/W-2	Track-2		

Press return to confirm the new name.

☛ Shortcut: when you are naming several tracks in a row, use the down arrow key to finish with the current track and pop-edit the next one in the list.

5. **Test the track setup by playing a few notes on your MIDI controller; you should hear drum sounds as you play.**

When you play notes on your controller, Performer receives them and then echoes them to the playback device for the currently record-enabled track—even when Performer is stopped. At this point, your controller should be playing the drum kit source you selected. If not, check the volume of the MIDI device. If it has a MIDI activity indicator, check to see if the indicator blinks when you play notes on your controller. If you have a multi-port MIDI interface such as a MIDI Time Piece II or MIDI Express, see if the MIDI OUT light corresponding to the MIDI Device blinks when you play your controller. These things will give you an indication of whether the MIDI note information is reaching the device or not. If not, see "Testing for MIDI input and output" on page 62.

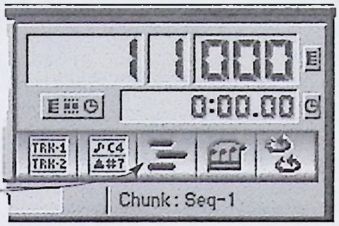
Open the Graphic Editing window to see what you record

Let's open the Graphic Editing window before we begin recording so we can see the notes we record.

1. **Click the track name "Drums" to highlight it.**

   Doing selects the track.

2. **Click the Graphic Editing window button in the Consolidated Controls panel.**



Graphic Editing button

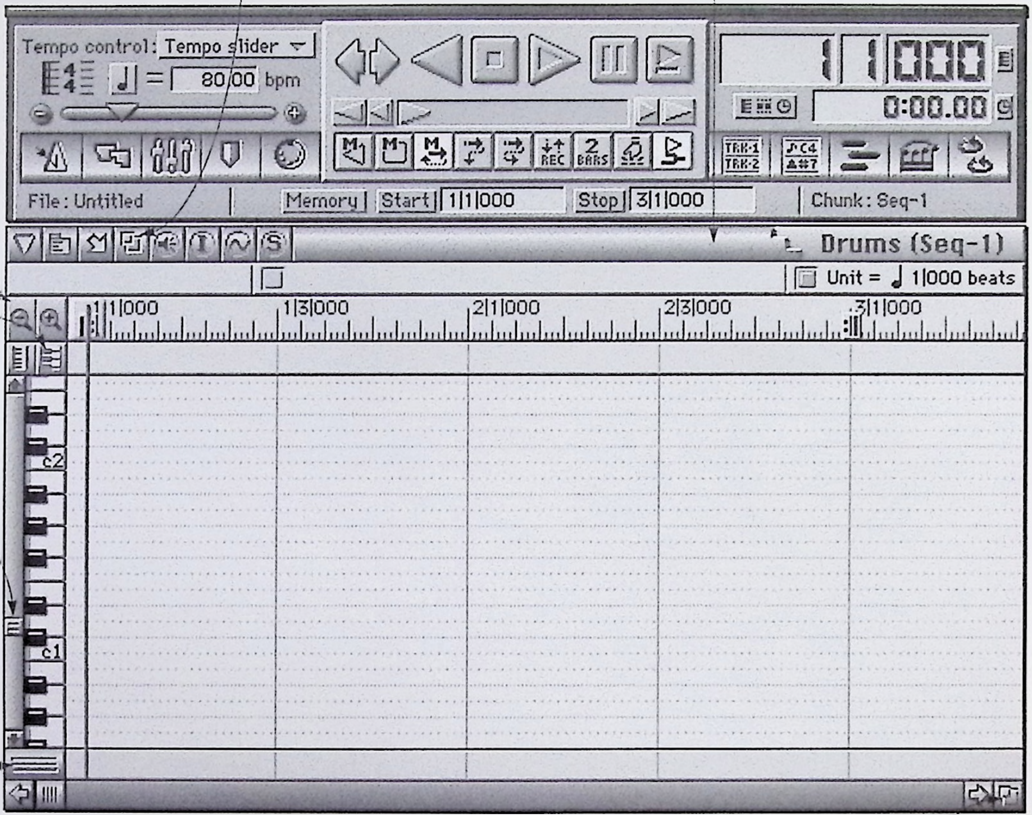
3. **After the Graphic Editing window appears, use the controls shown in the following diagram to optimize the position of the window on your screen.**

   Be sure to keep the main control panel visible, as you'll need to use it during recording.

Click the Time ruler "zoom in" button once (maybe twice) to fill the window with the looped region (the first two bars).

If you'd like to quickly open the window to the full width of your screen, click the resize button.

To move the Graphic Editing window, drag its title bar.


Tempo control:
Tempo slider
80.00 bpm
1 1 000
0:00.00
REC
2 BARS
TRK-1
TRK-2
File : Untitled
Memory
Start
1|1|000
Stop
3|1|000
Chunk : Seq-1
Drums (Seq-1)
Unit = ♩ 1|000 beats
1|1|000
1|3|000
2|1|000
2|3|000
3|1|000
c2
c1

Click the Pitch ruler "zoom in" button twice to zoom in on about a one-octave range.

Use the pitch ruler scroll bar to scroll the ruler and note grid to the note range that contains the drum pitches for kick, snare, and hi hat. These sounds are usually in the octave from C1 to C2 as shown here.

Drag the median strip handle all the way down to temporarily hide the continuous data grid (which will be covered later).

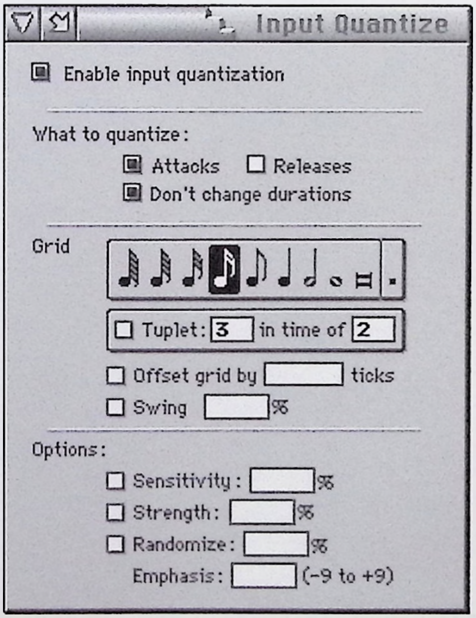
Drag the resize box to resize the entire window.

Quantize on input

Performer records what you play very accurately, including every timing nuance. Performer's Input Quantize feature can be a great help when recording drums, regardless of your level of drum or keyboard chops. Input Quantize places notes on an evenly spaced timing grid so that they are recorded in a rhythmically precise fashion. This helps get notes on the proper beat right as they are recorded so you don't have to spend time afterwards making slight corrections.

Don't worry about sounding stiff or robotic; we are going to apply a groove to the drum loop a little later in the tutorial to give it some feel.

1. **Choose Input Quantize from the Windows menu to open the Input Quantize window.**



Input Quantize

☒ Enable input quantization

What to quantize:

☒ Attacks ☐ Releases

☒ Don't change durations

Grid

☐ Tuplet: 3 in time of 2

☐ Offset grid by ticks

☐ Swing %

Options:

☐ Sensitivity: %

☐ Strength: %

☐ Randomize: %

Emphasis: (-9 to +9)

2. **Click the check box at the top of the window labeled Enable Input Quantize. Leave the rest of the options alone for now.**

3. **Close the Input Quantize window.**

   This window could be left open, but for now, click its close button at the far left of the title bar, or press command-w.

And now the fun really begins

You are ready to record! You'll now build the drum loop, one pass at a time. Try adding one drum part at a time as described in the next few sections, and feel free to let the loop play as many times as you want before recording the next part. If you make a mistake, you can either fix it in the Graphic Editing window or erase the pass entirely.

If you haven't done this sort of thing before with a drum machine or other pattern-based sequencer, you may find it useful to record related sounds together, such as kick and snare, and closed hi-hat with open hi-hat.

> ☛ Once you begin recording below, try to complete the drum loop without ever stopping the music. We've set up the tutorial so that you can fix mistakes, and do everything you need to do without ever having to hit the stop button. It's fun, and more importantly, you'll learn to become more interactive with the music.

Record kick and snare first

Let's start with the kick and snare:

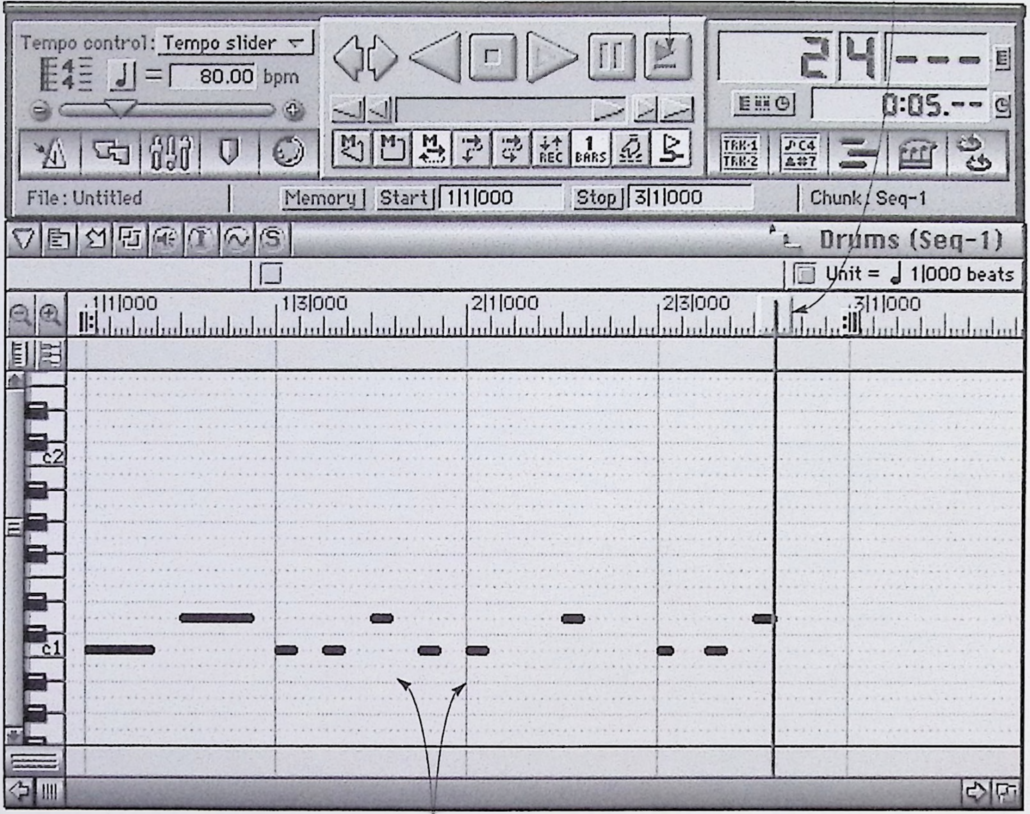
1. **Before you start recording, find the kick and snare keys on your controller keyboard.**

   For the purposes of this tutorial, it doesn't really matter what you play. If nothing else, play the kick "four on the floor" and the snare on beats two and four.

2. **When you are ready, click the Record button, listen to the countoff, and play a two bar kick-snare pattern.**
3. **If you make a mistake, don't worry. Let the loop keep playing for now and proceed to the next section.**

Record button

Scrolling wiper shows playback position.



Tempo control: Tempo slider

♩ = 80.00 bpm

File: Untitled

Start 1|1|000

Stop 3|1|000

Chunk: Seq-1

Drums (Seq-1)

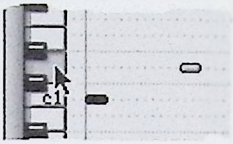
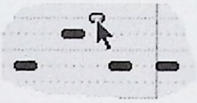
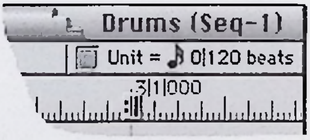
Unit = ♩ 1|000 beats

24---
0:05.--
Memory
REC
1 BARS
TRK-1 TRK-2
1|1|000
1|3|000
2|1|000
2|3|000
3|1|000
c2
c1

Kick and snare notes

Fix mistakes and get ready to add the hi-hat part

Here are several things you might want to do next:

What you want to do:	How to do it:
Erase all the notes and start over	Choose Undo from the Edit menu.
Erase all notes of one particular sound (such as all hi-hats)	Double-click the corresponding key on the pitch ruler, which selects all the notes of that pitch, and press the delete key. 
Erase a wrong note	Click it and press the delete key. 
Move a note earlier or later	Click the Edit Resolution note in the upper right corner of the window, change it to a sixteenth note, and then drag any note in the note grid.  Drums (Seq-1) Unit = ♪ 0|120 beats 3|1|000
Hear the drum loop at full tempo	Drag the tempo slider up to the desired tempo.
Practice the hi-hat part without recording it yet	Click the Record button to take Performer out of record and keep playing.
Record the hi-hat part	Click the Record button again to put Performer back into record mode and wait for the next iteration of the loop.
Stop loop recording altogether (because the phone rang or something)	Again, try to resist pressing the Stop button. But if you absolutely have to…

Add the hi-hat

To add the hi-hat, slow the tempo way down and play a boring, sixteenth-note pattern (four notes to each beat). (We'll spice it up later with a groove.)

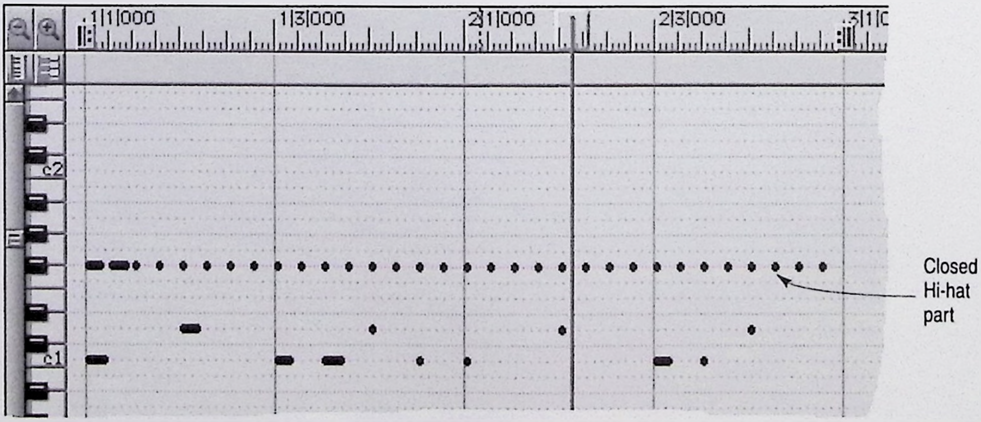
1. **Drag the tempo slider down to about 60 bpm.**
2. **Click the Record button to take Performer out of Record mode temporarily while you find a closed hi-hat key on your MIDI keyboard.**

   You may also want to practice playing the part once or twice before going back into record, just to get the hang of it.

3. **Once you've found the key, put Performer back into record by clicking the record button.**
4. **Wait for the loop to cycle back to the beginning.**
5. **Play the closed hi-hat part, in a sixteenth pattern, four notes to each beat.**

   Notice that Input Quantize makes them rhythmically precise. If you make a mistake, don't panic. Refer to the chart of the previous page to fix it or erase it and try again.

You should now have something like this:

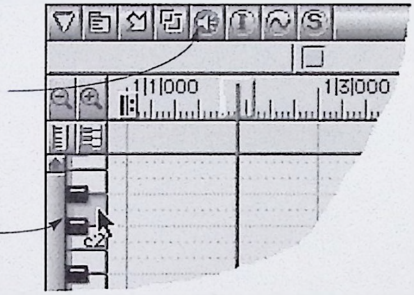


Add a few open hi-hats

Adding open hi-hats to the closed hi-hat part is easy. Just change a few closed hi-hat notes into open hi-hat notes by dragging them up or down.

1. **Drag one of the closed hat notes up or down to the open hi-hat pitch.**
2. **If you aren't sure what pitch is the open hi-hat, click the Audible mode button in the title bar and then click keys on the pitch ruler.**

   In audible mode, notes and keys on the pitch ruler play when you click them. Keep clicking the pitch ruler keys until you find the open hi-hat sound. Then drag the closed hi-hat note straight up or down to that pitch.

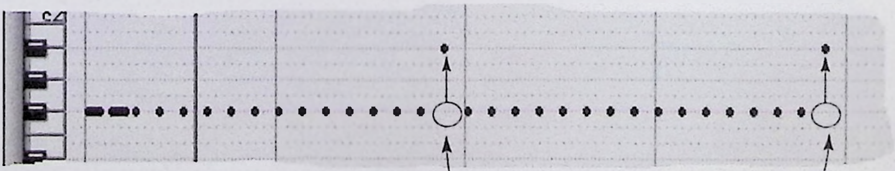


Audible mode button

Click the pitch ruler to hear each pitch in Audible mode.

3. **Do the same for a few other notes of your choice.**

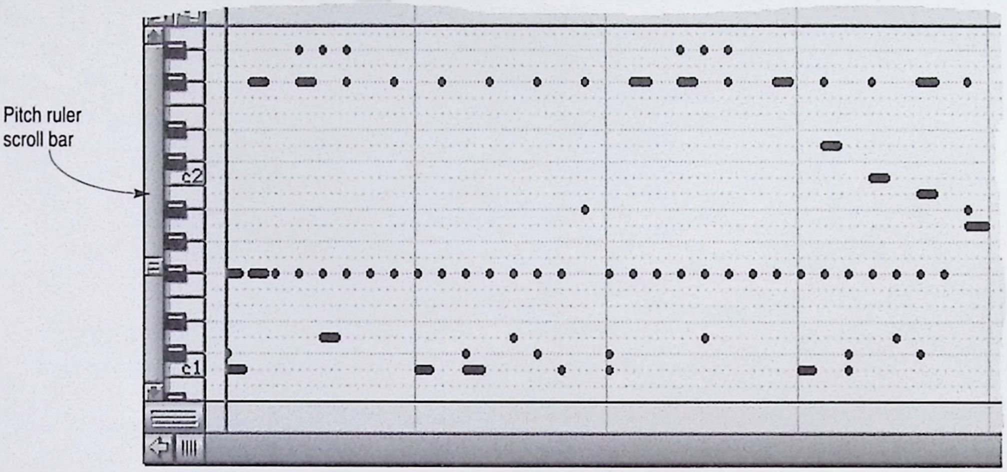
   Try using ones that are just before a measure downbeat.



Drag closed hi-hat notes up (or down) to the appropriate pitch to turn them into open hi-hat notes.

Add more percussion with what you already know

Congratulations! You've just created your first drum loop in Performer. With what you already know, feel free to add more percussion parts to the loop if you'd like. Just keep in mind that if the drum sound you want to record is not in the octave currently showing in the note grid, you'll need to scroll the grid with the pitch ruler scroll bar to see the notes.



Save what you have done so far

As you sequence, Performer stores your work in the computer's memory. But memory is volatile; it is completely erased when the computer is shut down or restarted. If this happens unexpectedly (the computer crashes, or the power goes out), you loose everything—unless you save it to disk. Therefore, get in the habit of saving every time you reach a point where you like what you've got so far. Try to save every few minutes during a session so you never risk losing more than a few minutes worth of work. If magic happens in a session and you record that perfect take, save it immediately. Once saved to disk, you run much less of a chance of losing your work, although even on disk it can be lost. So back up your hard disk, too.

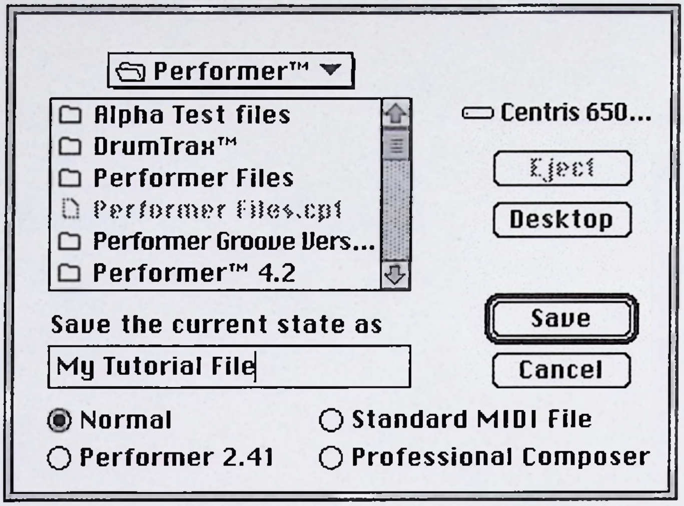
To save your file:

1. **Press the Stop button.**

   Saving is one of the few things that Performer can't do while playing.

2. **Choose Save from the File menu.**

   The standard Macintosh Save dialog box appears.


Performer™
Alpha Test files
DrumTrax™
Performer Files
Performer Files.cpt
Performer Groove Vers...
Performer™ 4.2
Centris 650...
Eject
Desktop
Save
Cancel
Performer 2.41
Standard MIDI File
Professional Composer

Save the current state as: My Tutorial File

● Normal

3. **Type in a name for the file.**
4. **If desired, choose a folder in which to save the file.**
5. **Click Save.**

Select the loop and apply a groove

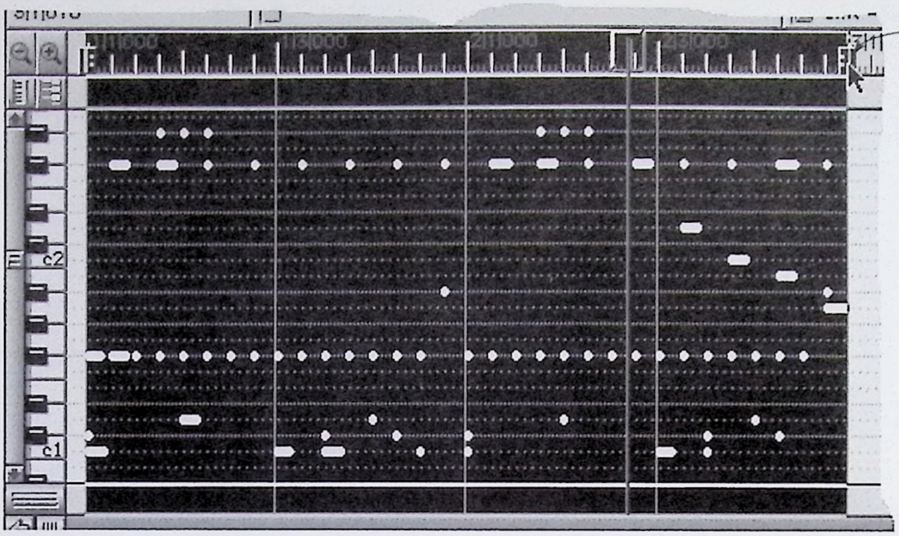
Now that we've successfully recorded the notes, let's apply a groove to the drum loop to give it some feel with the Groove Quantize command in the Region menu. You'll use the commands in the Region and Edit menus all the time.

1. **Press the Play button to start playback again.**
2. **Set the tempo slider to a tempo around 104 bpm.**

   This tempo suits the grooves we will apply in a moment.

3. **Select the drum loop by double-clicking either repeat barline icon in the time ruler.**

   The ruler and note grid highlights between the loop points.

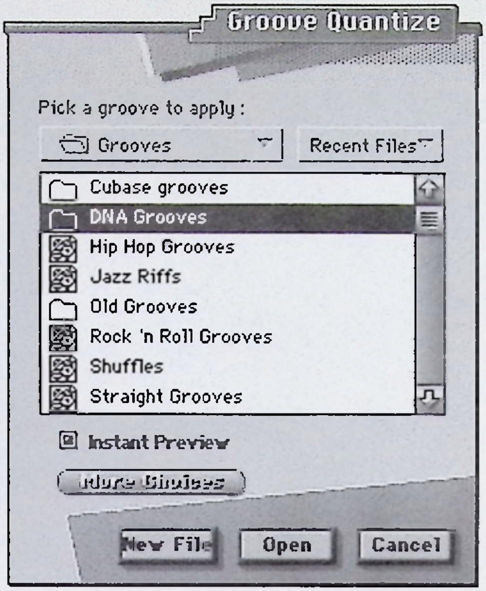


Double-click the loop point tab to quickly select the entire loop.

4. **Choose Groove Quantize from the Region menu.**

   The Groove Quantize dialog appears.

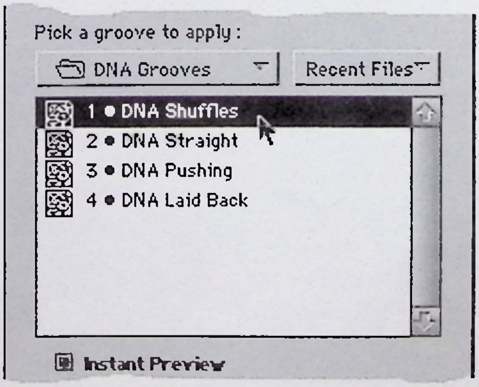
   ☛ If you get a message saying that Performer couldn't find the Grooves folder, you'll need to stop the tutorial for a moment to locate the groove folder in the Macintosh Finder and drag it into the same folder as Performer. If you'd rather not disrupt the flow of the tutorial, you can skip this section of the tutorial and flip to the next section.


Groove Quantize
Pick a groove to apply :
Grooves
Recent Files
Cubase grooves
DNA Grooves
Hip Hop Grooves
Jazz Riffs
Old Grooves
Rock 'n Roll Grooves
Shuffles
Straight Grooves
Instant Preview
More Choices
New File
Open
Cancel

5. **Double-click the folder called DNA Grooves.**

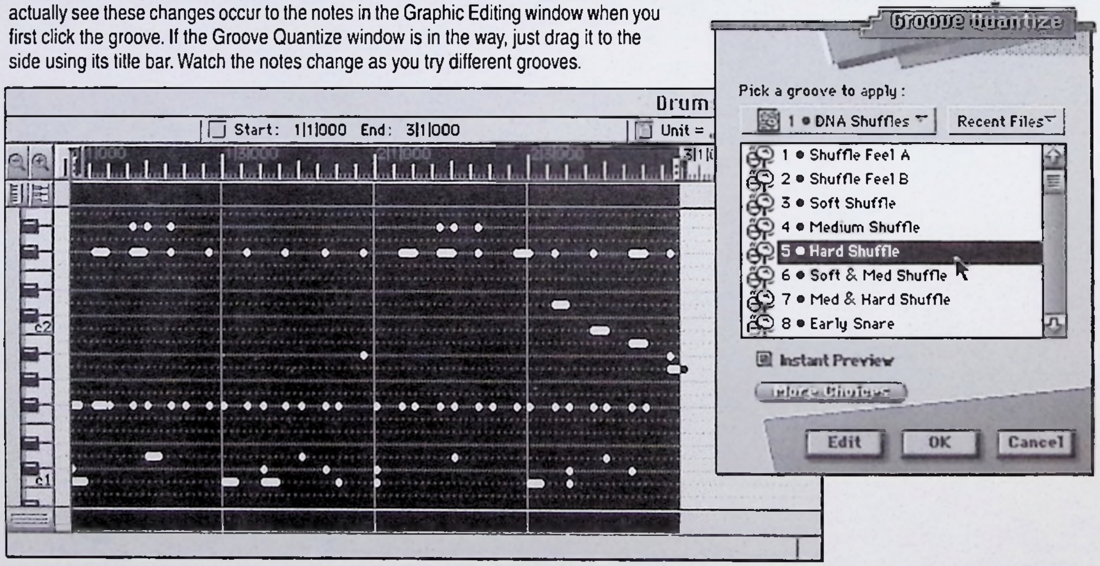
   Grooves are stored in groove files. The DNA Grooves folder has several groove files, called *DNA Grooves*™, provided free of charge with Performer by WC Research, Inc., who provide an extensive library of commercially available grooves.

6. **You'll now see a few groove files in the list as shown below. Double-click the file labeled "1•DNA Shuffles" to open it.**


Pick a groove to apply :
DNA Grooves
Recent Files
1 • DNA Shuffles
2 • DNA Straight
3 • DNA Pushing
4 • DNA Laid Back
Instant Preview

7. **Now you'll see a list of shuffle grooves. Make sure the "Instant Preview" check box is checked below the list, and click one of the grooves in the list to apply it to the drum loop.**

   When Instant Preview is turned on, the groove is applied to the loop as soon as you click on the groove name. But the groove doesn't get permanently applied until you click OK. So feel free to experiment with different grooves in the list. To try a different groove, just click its name.

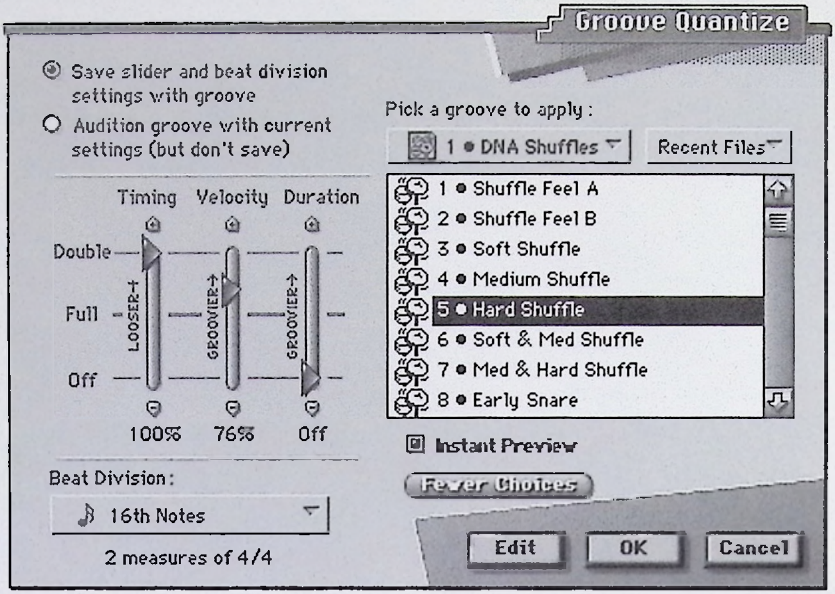

Drum
Start: 1|1|000 End: 3|1|000
Unit =
c2
c1
Groove Quantize
Pick a groove to apply :
1 • DNA Shuffles
Recent Files
1 • Shuffle Feel A
2 • Shuffle Feel B
3 • Soft Shuffle
4 • Medium Shuffle
5 • Hard Shuffle
6 • Soft & Med Shuffle
7 • Med & Hard Shuffle
8 • Early Snare
☑ Instant Preview
More Choices
Edit
OK
Cancel

When you click on a groove, it gets applied immediately to the selected region of notes. The groove changes the timing, duration and on-velocities of the notes. You can actually see these changes occur to the notes in the Graphic Editing window when you first click the groove. If the Groove Quantize window is in the way, just drag it to the side using its title bar. Watch the notes change as you try different grooves.

Drag the title bar to move the Groove Quantize dialog.

8. **When you find a groove you like, click the More Choices button.**

   This button adds more controls to the Groove Quantize window.


Groove Quantize
Timing
Velocity
Duration
Double
Full
Off
LOOSER→
GROOVIER→
GROOVIER→
1 • Shuffle Feel A
2 • Shuffle Feel B
3 • Soft Shuffle
4 • Medium Shuffle
5 • Hard Shuffle
6 • Soft & Med Shuffle
7 • Med & Hard Shuffle
8 • Early Snare
Recent Files
Fewer Choices
Edit
OK
Cancel

● Save slider and beat division settings with groove

○ Audition groove with current settings (but don't save)

Timing 100% Velocity 76% Duration Off

Beat Division: 16th Notes

2 measures of 4/4

Pick a groove to apply : 1 • DNA Shuffles

☑ Instant Preview

9. **Use the three faders to experiment with changing the degree to which the groove is applied.**

   The three faders control how much timing, velocity, and duration information is applied from the groove. They let you fine-tune the effect of the groove. With Instant Preview turned on, changes you make to a slider occur as soon as you release the slider handle.

10. **After you're done experimenting, and you have the groove the way you like, click OK to apply the groove to the drum loop.**

    The Groove Quantize dialog goes away, and the groove is permanently applied to the drum loop.

11. **Press the Stop button to stop playback at this time, and press rewind to rewind to measure 1, beat 1.**

12. **Now would be a good time to save the file again. Choose Save from the File menu.**

    Since you already created and named the file once already, it doesn't ask you for a name this time. Instead, it just saves the file to disk in its current state.

Prepare to record a second track

Let's put away the Graphic Editing window for now. To do so, click its close button at the far left of the title bar. Now let's prepare Track-2 for recording.

1. **Record-enable Track-2.**

   There are two ways to do this: 1) click the record-enable button in the Tracks list window, or 2) press the down arrow key.

2. **Choose a playback device for Track-2 from the Device pop-up menu.**

   For a review of this procedure, see "Set up a track for recording" on page 110.

3. **Choose a bright piano or bright synth sound for the new track from the Patch column (or call up the sound manually from the device itself, if sound names are not yet showing in Performer's patch pop-up menu).**

   If you have a general MIDI sound module, use "Honky Tonk Piano".

4. **Rename the track "Chords".**

   As you did earlier in the tutorial, option-click the word "Track-2" to pop-edit the name.

5. **Test the track by playing a few notes on your controller keyboard.**

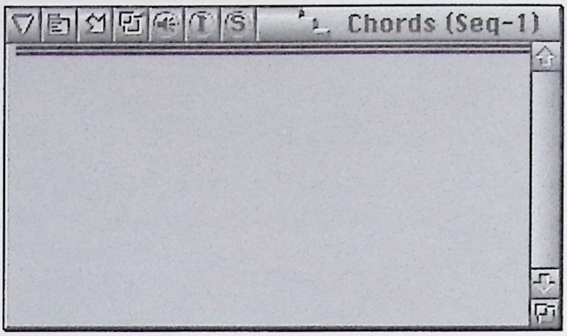
   You should hear the piano sound you called up earlier.

Step record a piano part

Step Record is a powerful sequencing feature because it lets you record notes one at a time. It is especially useful if you don't have well-practiced keyboard skills. We'll use it to enter some half-note chords:

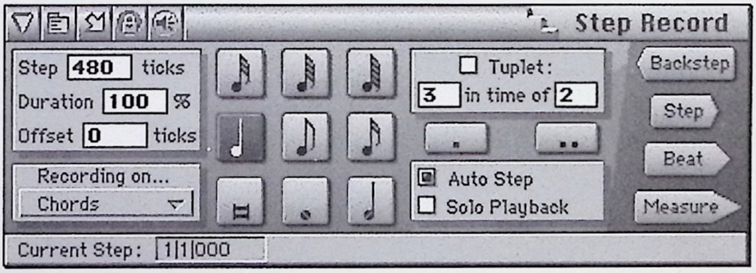
1. **Press the Rewind button to make sure that the sequence is rewound to measure 1, beat 1.**

2. **To be able to see what you are entering, double-click the track name "Chords" to open the event list window for the Chords track.**


Chords (Seq-1)

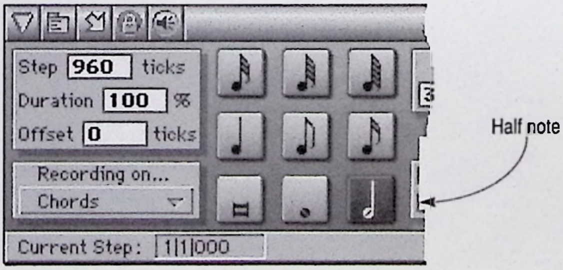
3. Choose Step Record from the Basics menu.

The Step Record window appears. If necessary, move the Step Record window by dragging its title bar so that it doesn't obscure the event list window.

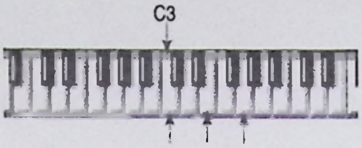

Step Record
Backstep
Step
Beat
Measure

Step 480 ticks
Duration 100 %
Offset 0 ticks
Recording on... Chords
☐ Tuplet: 3 in time of 2
☒ Auto Step
☐ Solo Playback
Current Step: 1|1|000

4. Click the half note duration button.



Step 960 ticks
Duration 100 %
Offset 0 ticks
Recording on... Chords
Current Step: 1|1|000

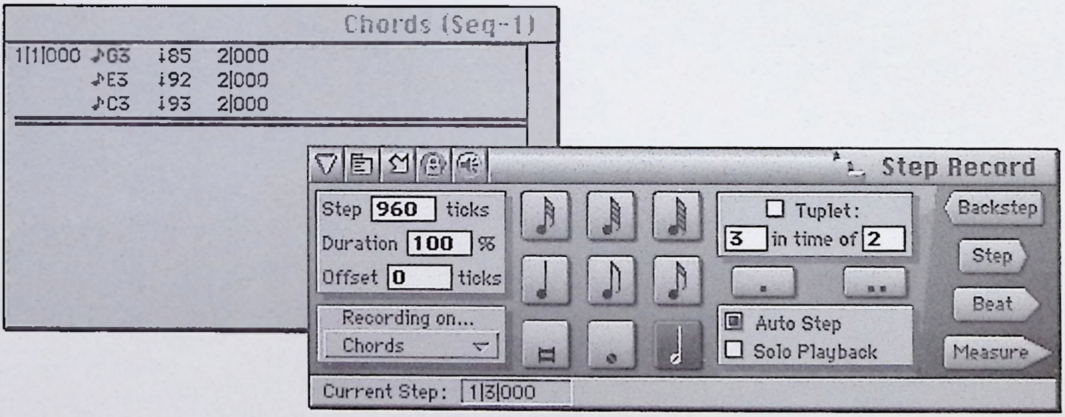


The first chord

5. **The first chord you'll enter is a simple C major triad (C-E-G) starting on middle C (C3). To enter the chord, press these three keys down together once and then release them together.**

   The chord is actually entered when you release the keys. Notice that the current step and the main counter advance the duration of a half note to beat 3. In addition, Performer plays the first two beats of the measure when you enter the notes so you can hear the chords in context with the rest of the sequence. Notice also that the chord notes displayed in the event list are precise half notes: they have a duration of two beats (2|000) and all occur together exactly on beat 1 (1|1|000).

   ☛ If you make a mistake, Don't worry. Press the Backstep button and try again.



Chords (Seq-1)

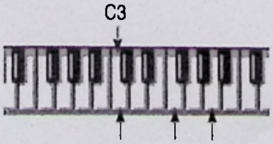
```
1|1|000 ♪G3  ↓85  2|000
        ♪E3  ↓92  2|000
        ♪C3  ↓93  2|000
```

Step Record

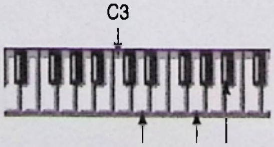
Step 960 ticks
Duration 100 %
Offset 0 ticks
Recording on... Chords
☐ Tuplet: 3 in time of 2
☒ Auto Step
☐ Solo Playback
Current Step: 1|3|000

6. **In a similar fashion, play the second chord: F maj (for beats 3 and 4 of measure 1).**

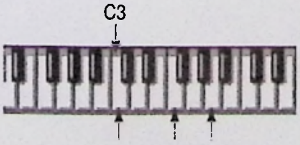
   Remember, when you are step recording, you can take as much time as you want with each step. Use the Backstep button if you make a mistake and need to re-enter the chord.



The second chord



The third chord



The fourth and last chord

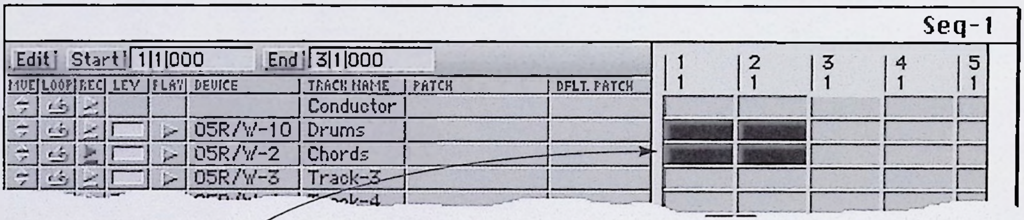
7. **At your leisure, play chords three (G minor) and four (F major again).**

   Be sure to completely take your hands off the keys before playing the next chord. In fact, it is good technique when step-recording to play in a staccato fashion—almost as if you were pecking at the notes. This ensures that you won't play too many notes on a beat.

8. **When you are done, close the Step Record window.**

   You now have two bars of chords in the sequence.

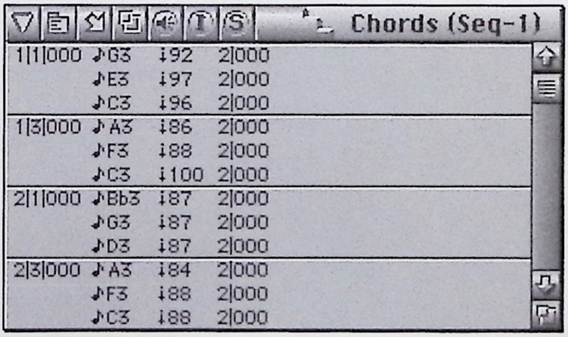
9. **To hear the chords play back in real time with the drums, press the Memory-cycle button to turn it back on (Step Record turns it off), press the Rewind button, and then press the Play button.**



Seq-1

Start 1|1|000 End 3|1|000

MUE	LOOP	REC	LEV	PLAY	DEVICE	TRACK NAME	PATCH	DFLT. PATCH
						Conductor		
					05R/W-10	Drums		
					05R/W-2	Chords		
					05R/W-3	Track-3		



Chords (Seq-1)

```
1|1|000 ♪G3  ↓92  2|000
        ♪E3  ↓97  2|000
        ♪C3  ↓96  2|000
1|3|000 ♪A3  ↓86  2|000
        ♪F3  ↓88  2|000
        ♪C3  ↓100 2|000
2|1|000 ♪Bb3 ↓87  2|000
        ♪G3  ↓87  2|000
        ♪D3  ↓87  2|000
2|3|000 ♪A3  ↓84  2|000
        ♪F3  ↓88  2|000
        ♪C3  ↓88  2|000
```

Two bars of step-recorded chords.

Set up a bass track

Now let's add one more track: a bass part.

1. **Record-enable Track-3.**
2. **Choose a playback device and channel from the Patch column in the Tracks window.**

3. **Choose a bass sound for the track from the Patch column (or call up the sound manually from the device itself, if sound names are not yet showing in Performer's patch pop-up menu).**

4. **Change the name of Track-3 to "Bass".**

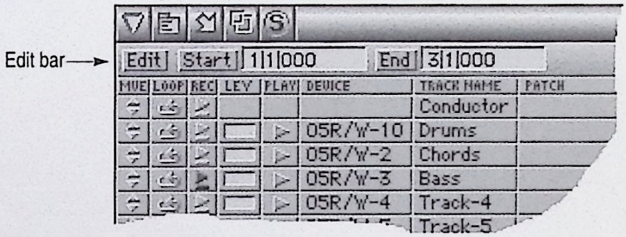
Enter the bass part in the QuickScribe notation window

You're now ready to enter the bass part. Let's do it by inserting notes graphically in the QuickScribe notation window. If you don't read music notation, don't worry. You'll still be able to follow the tutorial here.

1. **Select the Bass track by clicking its name.**

2. **Check to see that the end time in the Edit bar is 3|1|000. If not, double-click the Edit button in the Edit bar.**

   This selects the first two bars in the Bass track.

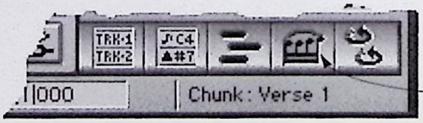


Edit bar

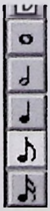
Edit | Start 1|1|000 | End 3|1|000

MUTE	LOOP	REC	LEV	PLAY	DEVICE	TRACK NAME	PATCH
						Conductor	
				▷	05R/W-10	Drums	
				▷	05R/W-2	Chords	
				▷	05R/W-3	Bass	
				▷	05R/W-4	Track-4	
						Track-5	

3. **Click the QuickScribe notation button to open the QuickScribe window.**



QuickScribe notation button



Eighth note

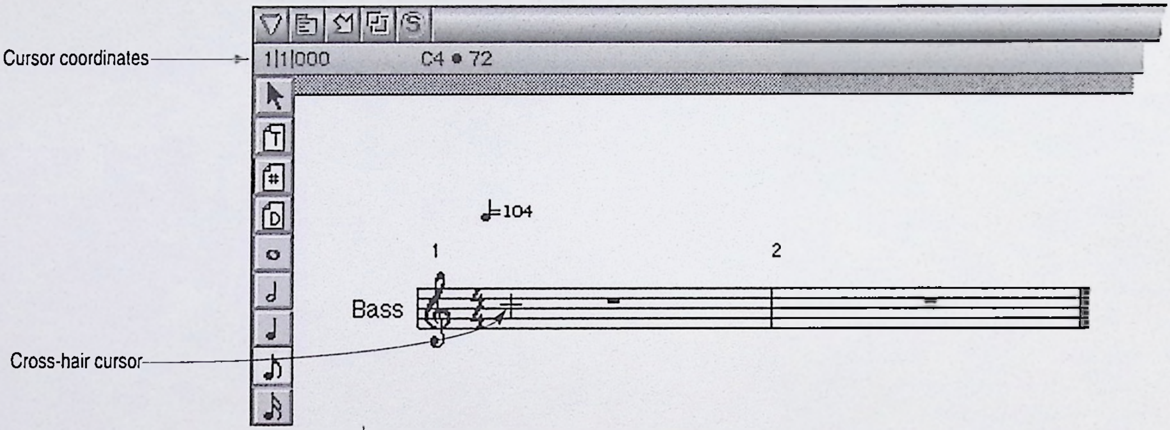
4. **Click the eighth note in the tool palette to select an eighth note duration.**

   The cursor turns into a cross hair to indicate it is ready to insert notes.

5. **Place the cross-hair cursor in the middle space on the staff on beat one in the first measure.**

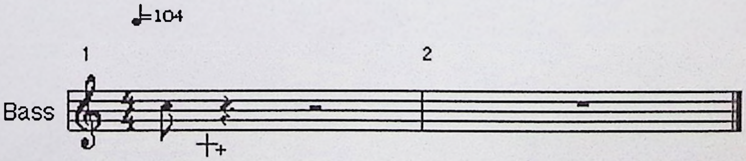
   Use the cursor coordinates display to help you position the cursor. Before you click, the cursor coordinates should read "1|1|000 C4 • 72".

   ☛ We are entering the bass part in the middle of the treble clef staff to avoid dealing with lots of ledger lines below the staff. We will transpose the notes down to the proper octave after we enter them. The clef with then automatically change to a bass clef.



6. **Click the mouse to insert an eighth note on beat one.**

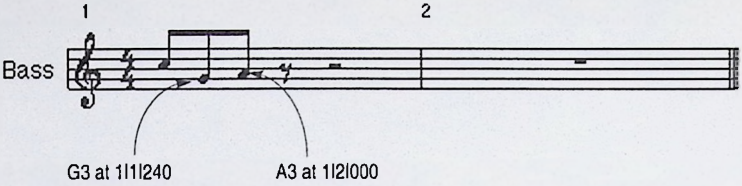
   ☛ If you make a mistake, don't worry. To fix it, you have two choices: 1) choose Undo from the Edit menu and try again, or 2) drag the note up, down, left, or right to the correct pitch or location. To drag the note, click the notehead and drag as needed.

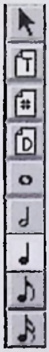


7. **In a similar fashion, enter the next two eighth notes in bar 1.**

   Use the cursor coordinates display to position the cursor at the proper beat and pitch before you click. Notice also that the cursor "snaps" to a grid to help guide you.

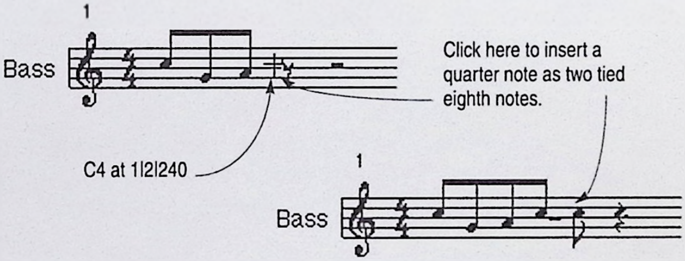
   ☛ Don't worry about the rests, ties, and beams. Performer adds them automatically.


1
2
Bass
G3 at 1|1|240
A3 at 1|2|000



8. **Now let's enter a quarter note. Click the quarter note icon in the tool palette and click as shown below.**

   Performer properly notates the quarter note as two tied eighth notes because it lies across a beat boundary.


1
Bass
Click here to insert a quarter note as two tied eighth notes.
C4 at 1|2|240
1
Bass

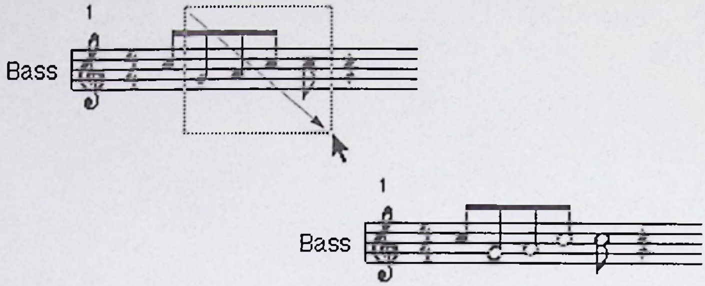
Complete bar 1 by copying and pasting

Let's complete bar 1 by learning how to copy and paste notation.

1. **Click the arrow in the tool palette to select it.**

   The cursor changes back to the standard Macintosh arrow.

1. **Select all the notes except the first one by dragging as shown below.**

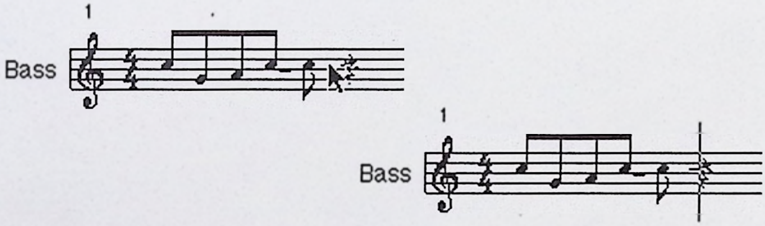


2. **Choose Copy from the Edit menu.**

   This copies the notes into the Clipboard.

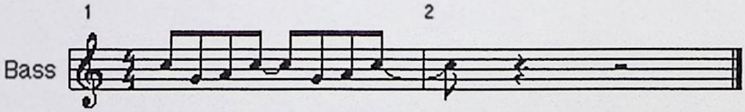
3. **Click in measure 1 to the right of the last note.**

   An insertion cursor appears on the staff.



4. **Choose Paste from the Edit menu.**

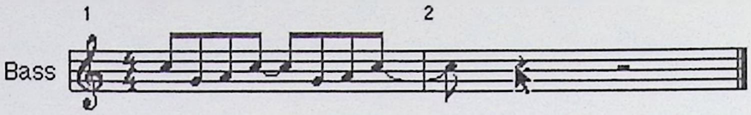
   The notes are pasted into the measure.

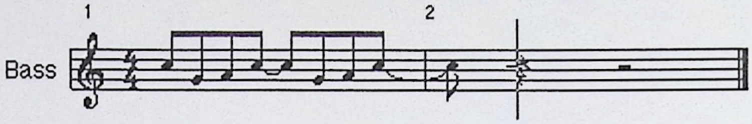


Finish bar 2 with Macintosh keyboard note insertion

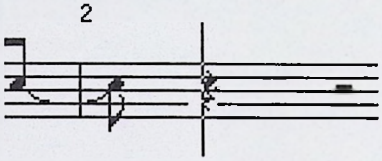
The QuickScribe notation window also provides note insertion directly from the Macintosh keyboard. Let's finish bar 2 from the Macintosh keyboard. First, we need to place the insertion cursor back on the staff.

1. **Click in bar 2 on the rest after the first note to place the insertion cursor there.**





2. **Use the up and down arrow keys to move the cross-hair to the second line from the bottom as shown below.**

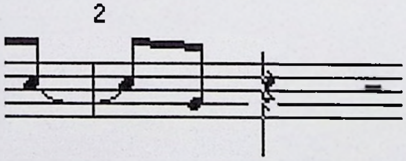


3. **Press the right bracket key ( ]) twice.**

   This selects the eighth note tool in the palette. You can freely use the right-bracket and left-bracket keys to select any duration tool in the palette.

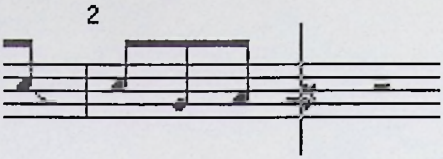
4. **Press the return key.**

   Another eighth note appears in bar 2.



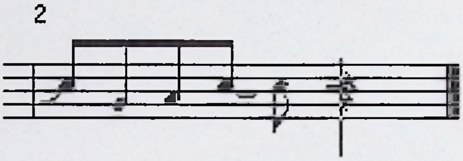
5. **Press the up-arrow key to move up to the second space**

6. **Press return to enter the next eighth note in the second space.**



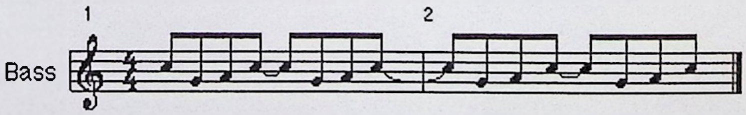
7. **Press the left-bracket key once to change to the quarter note tool in the palette, and press the up-arrow twice to move the cross hair to the middle space.**

8. **Press return to enter the quarter note.**



9. **Use the keys shown below to finish the measure.**

To do this:	Type this:
Select the eighth note tool	Left-bracket ([ ) & right-bracket ( ])
Move the cross-hair up and down	Up arrow & down arrow
Move the cursor left and right	Left arrow & right arrow
Insert a note	Press return
Fix a mistake	Choose Undo from the Edit menu



Transpose the bass part to the proper octave

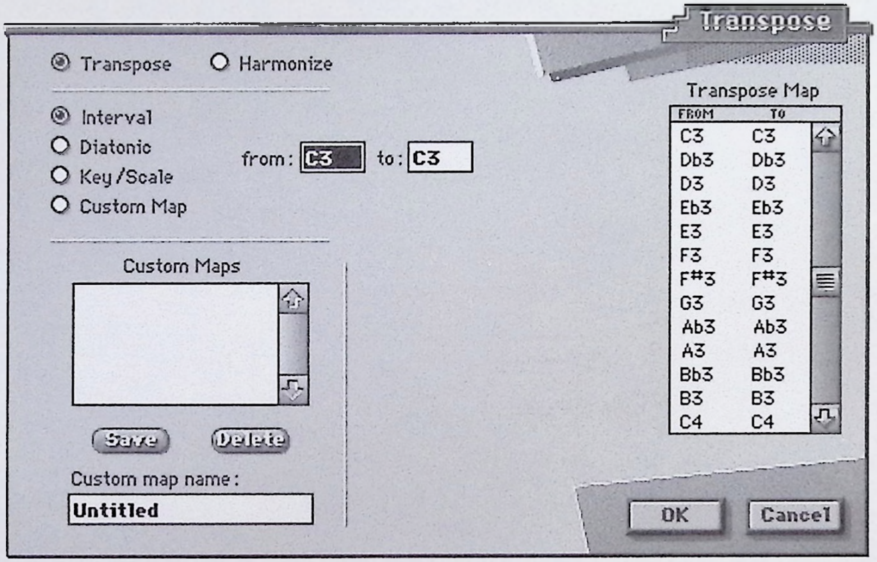
For ease of entry, we entered the bass part on a treble clef staff in the octave of C3 to C4, which is too high. Let's transpose it down to the proper octave.

1. **Choose Select All from the Edit menu to select all the notes.**

   Alternately, you could press command-A. This convention works in just about every window in Performer.

2. **Choose Transpose from the Region menu.**

   The Transpose dialog box appears.



● Transpose ○ Harmonize

● Interval
○ Diatonic
○ Key/Scale
○ Custom Map

from: C3 to: C3

Custom map name: Untitled

Transpose Map

FROM	TO
C3	C3
Db3	Db3
D3	D3
Eb3	Eb3
E3	E3
F3	F3
F#3	F#3
G3	G3
Ab3	Ab3
A3	A3
Bb3	Bb3
B3	B3
C4	C4

Let's transpose by interval down three octaves:

3. **Play C4 on your MIDI keyboard so that it shows up in the highlighted "From" box on the screen.**

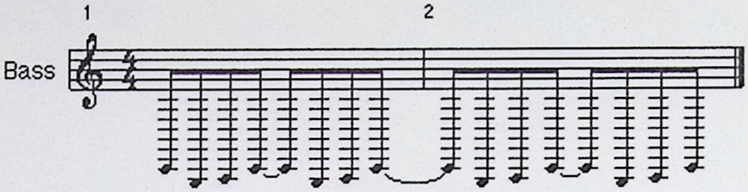
   If you don't get C4 on your first try, don't worry. Keep playing until you see "C4" appear in the box.

4. **Press the tab key once to highlight the second box labeled "to", and then play C1.**

   The dialog should now say From C4 to C1".

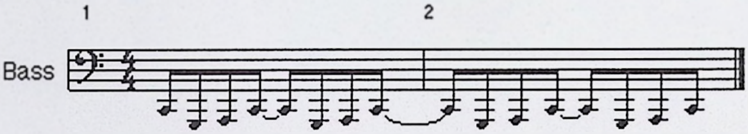
5. **Click OK.**

   The notes are transposed down three octaves.



6. **To switch the clef to a bass clef, choose Repaginate from the QuickScribe window mini-menu.**

   The staff is automatically redrawn with a bass clef. Performer automatically senses the appropriate clef for each staff.



7. **Close the QuickScribe window for now by clicking its close box at the far left of its title bar.**

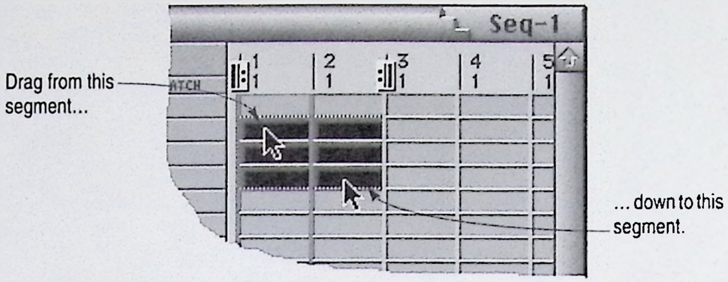
You can print out the contents of the QuickScribe window. For more information, see chapter 23, "QuickScribe Notation" (page 345) in the Reference Manual for more information.

Make a four bar phrase

Let's make our two bar loop into a four bar phrase now by making a copy of it in bars 3 and 4.

1. **In the Tracks Overview, press on the upper left segment in the Drum track and drag down and to the right over the last segment in the bass track.**

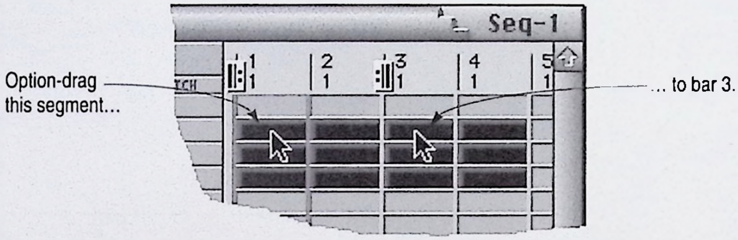
   This selects the first two bars in all three tracks.


Seq-1
1
1
2
1
3
1
4
1
5
1
ATCH

Drag from this segment...

... down to this segment.

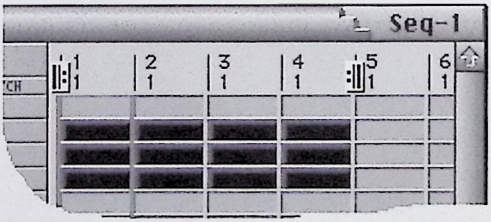
2. **While holding down the option key, click the upper left segment again and drag two columns to the right to drop it in bar 3.**


Seq-1
1
1
2
1
3
1
4
1
5
1
TCH

Option-drag this segment...

... to bar 3.

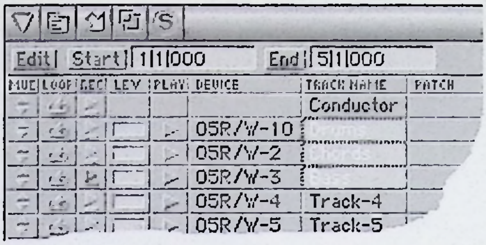
3. **Move the Memory-cycle end point to bar 5.**


Seq-1
1
1
2
1
3
1
4
1
5
1
6
1
CH

Create a mixing console

Now let's create a mixing console to control volume and panning.

1. **Select the three tracks by dragging over their names in the Tracks lists.**

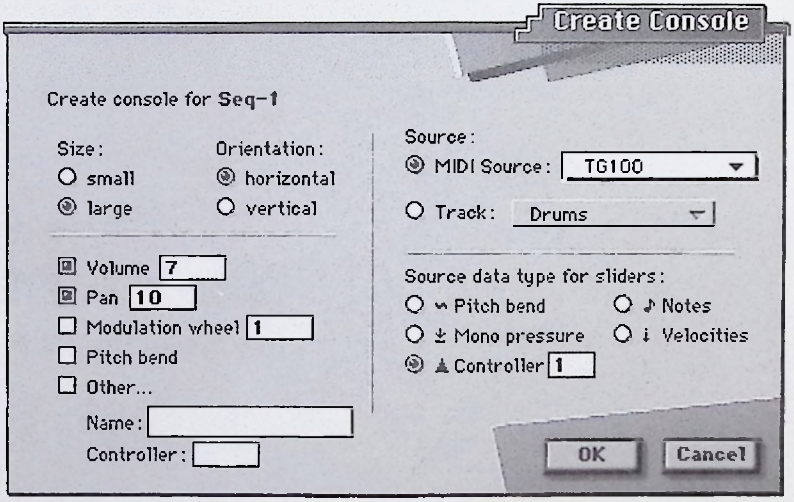


Edit | Start 1|1|000 End 5|1|000

MUTE	LOOP	REC	LEV	PLAY	DEVICE	TRACK NAME	PATCH
						Conductor	
					05R/W-10	Drums	
					05R/W-2	Chords	
					05R/W-3	Bass	
					05R/W-4	Track-4	
					05R/W-5	Track-5	

2. **Choose Create Console from the Tracks window mini-menu.**

   A dialog box appears.



Create Console

Create console for Seq-1

Size:
○ small
● large

Orientation:
● horizontal
○ vertical

☒ Volume 7
☒ Pan 10
☐ Modulation wheel 1
☐ Pitch bend
☐ Other...
Name:
Controller:

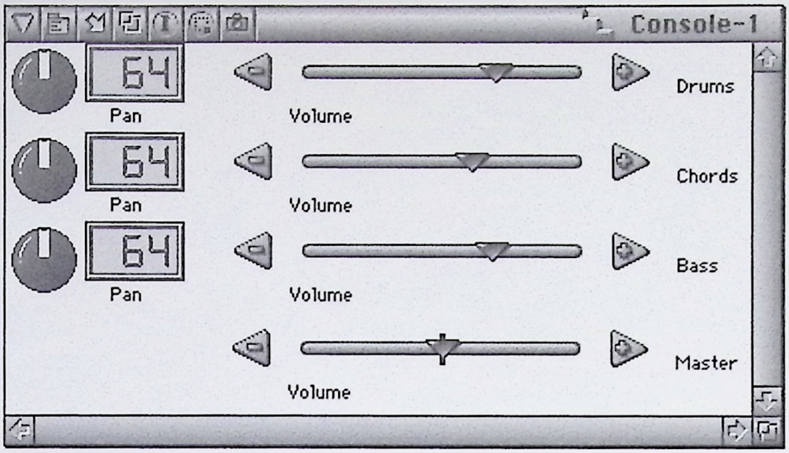
Source:
● MIDI Source: TG100
○ Track: Drums

Source data type for sliders:
○ Pitch bend
○ Notes
○ Mono pressure
○ Velocities
● Controller 1

3. **Choose the orientation and size that you would like, and click the Volume and Pan options.**

4. **Ignore the other options for now and click OK.**

   Performer creates a new console for you, complete with a master fader. You can create an unlimited number of consoles in Performer. This console emulates a hardware mixing console, and you can create a real-time, automated mix-down of your music.


Console-1
64
Pan
Volume
Drums
64
Pan
Volume
Chords
64
Pan
Volume
Bass
Volume
Master

5. **Start playback by pressing the space bar, and adjust the mix as follows.**

To do this:	Do this:
Adjust a track's volume	Drag each track slider individually. You can also press on the plus and minus buttons, or click anywhere on the slider to make a sudden jump.

Adjust panning	Drag a knob up and down or left and right. You can also click on the value box next to the knob and type in the desired value (between zero and 127, where 64 is pan center).
Smoothly fade all tracks at once	Drag the master fader.
Record a fader movement	**1. Record-enable any empty track.** **2. Press the Record button.** **3. Move the fader you want to record.** When you record a fader, it generates a stream of continuous controller data in the track it controls. Since you are Memory-cycle recording, be aware of where you are in the loop as you record so that you don't overlap. For example, try to start recording in bar 1 and finish in bar 4. To start recording the slider, just grab it's handle with the mouse. To stop, just let it go.
Watch a fader animate after recording	Just play the sequence.

☛ Some MIDI synthesizers don't respond to a MIDI mixing console like this one. If you don't get any response from your MIDI device as you adjust the controls in the console, this is probably the case. Try assigning the tracks to a different MIDI device, if you have one.

6. **Before we move to the last section of the tutorial, adjust the mix to a comfortable setting.**

7. **Close the mixing console by clicking its close box. You can re-open it at any time by choosing it from the Windows menu.**

Open the Chunks list

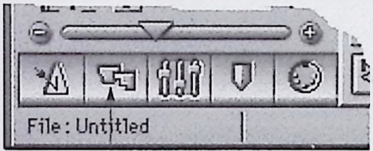
Congratulations! You have just built a sequence in Performer. You now know enough to build your own sequences of any length with any number of tracks. Many people use the Tracks window as their sole organizing tool for their music. You can create sequences hundreds of bars long and you can organize them with markers.

Performer has another way to organize your music: the Song window. The Song window gives you a graphical, structural view of your music. And creating a song is easy. First you build sequences just like the one we made in this tutorial. Then you arrange them in a song window. Let's try it now.

1. **Close the Tracks window.**

2. **Open the Chunks List window by clicking its button in the Control panel.**

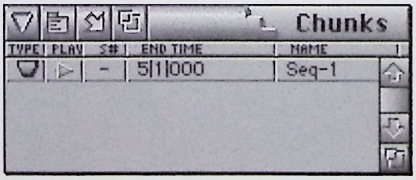
   The Chunks list window shows you all of the sequences and songs—collectively referred to as *chunks*—in the Performer file you have open.



The Chunks list button.

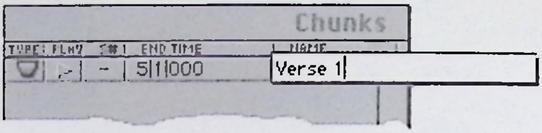
3. **The Chunks list window appears, showing Seq-1, the sequence have been working on in this tutorial.**

   Seq-1 is play-enabled, and it is four bars long, so it has an end time of 5|1|000, which is the downbeat of measure five.



TYPE	PLAY	S#	END TIME	NAME
	▷	-	5|1|000	Seq-1

4. **Rename Seq-1 by option-clicking its name to pop-edit the name. Call it “Verse 1”. Press Return to complete the change.**



Create an intro sequence

Let’s create a modified version of “Verse 1” so we have two sequences to work with:

1. **Click the sequence name to select it.**
2. **Choose Copy from the Edit menu.**
3. **Choose Paste from the Edit menu.**

   A second copy of Verse 1 appears in the list. Currently, they are identical.

4. **Rename the second copy; call it “Intro”.**

   Now let’s modify the Intro sequence a little bit so that it sounds different from Verse 1.

5. **Double-click the name “Intro” to open the Tracks list window for it.**

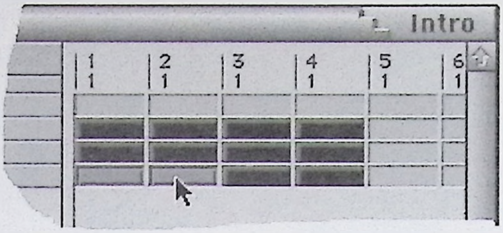
   First, let’s delete the empty tracks.

6. **Select Track-4 through Track-8 and choose Delete from the Tracks window mini-menu.**

   Now let’s delete the first two bars of bass.

7. **Select the first two bars of the bass track in the Tracks overview.**

   To do so, you can drag over them, or shift-click each one.



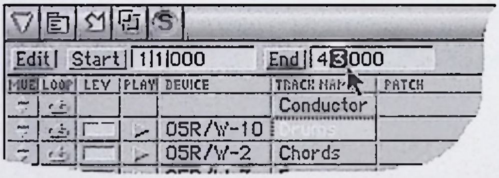
8. **Press the delete key to clear the selected segments.**

   Now let's delete all but the last two beats of the drum track.

9. **Click the track name "Drums".**

10. **Set the Start time in the Edit bar to 1|1|000, and set the End time to 4|3|000.**

    To set the times, click on one of the numbers, type to change it, use the tab key to cycle to the next number, and press return when you are done.

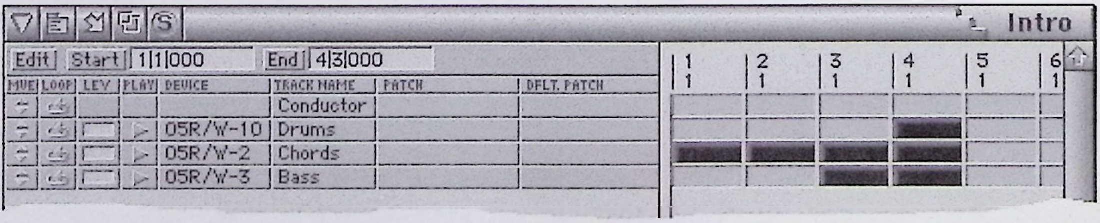


Edit | Start | 1|1|000 End | 4|3|000

MUE	LOOP	LEV	PLAY	DEVICE	TRACK NAME	PATCH
					Conductor	
				05R/W-10	Drums	
				05R/W-2	Chords	

11. **Choose Erase from the Edit menu, or press the delete key.**

12. **The Tracks Overview should now reflect the changes we have made.**



Edit | Start | 1|1|000 End | 4|3|000

MUE	LOOP	LEV	PLAY	DEVICE	TRACK NAME	PATCH	DFLT. PATCH
					Conductor		
				05R/W-10	Drums		
				05R/W-2	Chords		
				05R/W-3	Bass		

13. **Close the Tracks window by pressing command-w.**

Listen to the intro

Now let's listen to the Intro.

1. **Click the Play button in the Chunks list next to the Intro sequence.**

   Notice that the Verse 1 sequence un-play-enables when you do so. Only one sequence can be play-enabled at a time in this list. You'll see in a moment how to play several at once.

2. **Start playback by pressing the space bar. Press the space bar again to stop when the sequence reaches the end of the four bars.**

Create a song

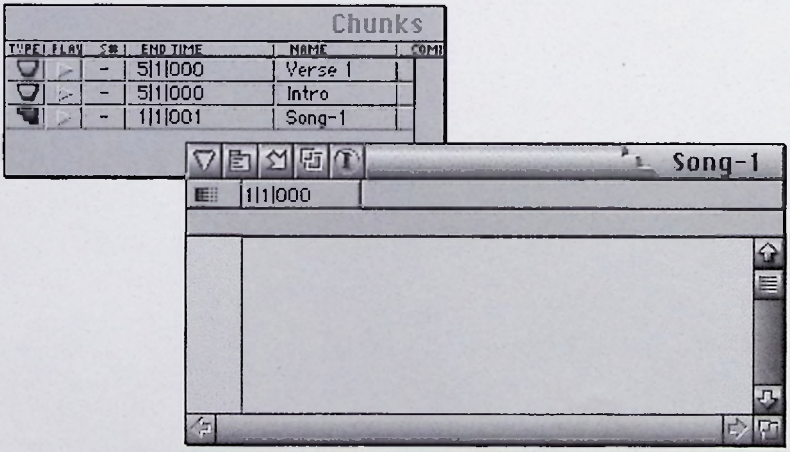
Let's build a song with these two sequences.

1. **Choose Add Song from the Chunk list window mini-menu.**

   A song appears in the list. Notice that it has a different icon than the sequences.

2. **Double-click the name "Song-1" to open the Song window.**

   The Song window appears.



TYPE	PLAY	S#	END TIME	NAME	COM
	▷	–	5|1|000	Verse 1	
	▷	–	5|1|000	Intro	
	▷	-	1|1|001	Song-1	

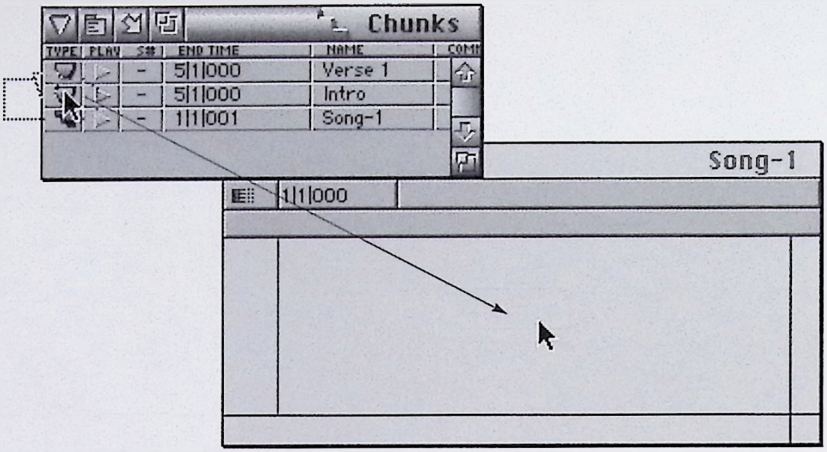
1|1|000

Add sequences to the song

Now we can build the song out of the component sequences.

1. **Drag the icon for the Intro sequence from the Chunks list into the middle of the Song window.**

   You may need to reposition the windows beforehand.



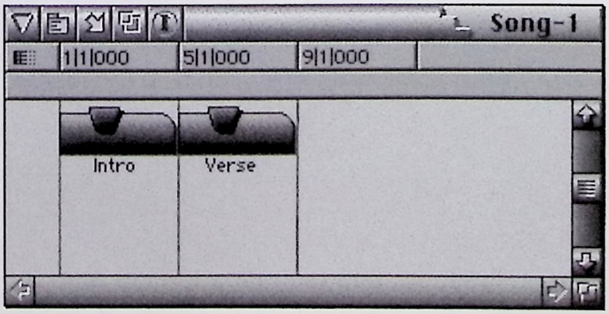
TYPE	PLAY	S#	END TIME	NAME	COMM
		-	5|1|000	Verse 1	
		-	5|1|000	Intro	
		-	1|1|001	Song-1	

2. **The Intro sequence snaps to the first column at 1|1|000.**

   Notice also that a new column is automatically created after the sequence.

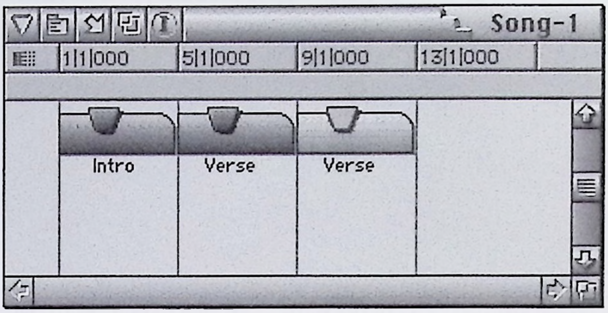
3. **Add the Verse 1 sequence in a similar fashion, dropping it into the song to the right of the intro sequence.**

   Notice that the Verse 1 sequence snaps to the column at the end of the intro sequence.



4. **Duplicate the Verse chunk by option-dragging it to the right. Drop the duplicate to the right of the column at 9|1|000.**

   You can freely drag sequences—and even other songs—around in this window. If you option-drag, you make a duplicate. The duplicate is actually a reference to the original sequence in the Chunks list window; duplicating in the Song window does not create new data. Instead, it creates another reference to the original data. If you change the original, all instances of it change, too.



Play the song

To play the song:

1. **Click its play button in the Chunks list window.**
2. **Set the metronome slider to 104 bpm.**

   A song has its own tempo setting—although you can make it follow the tempos of its component sequences if you want.

3. **Turn off Memory-cycle.**
4. **Press the play button, or hit the space bar.**

Congratulations!

You now know enough about Performer to sequence your heart out. Believe it or not, we've only scratched the surface. Performer has many more powerful features. We strongly urge you to check out the Reference Manual. You'll probably find features not covered in this tutorial that will be of immediate use to you. Also be sure to consult the addendum section in this guide: it contains important information about enhancements that have been made to Performer not covered in the Reference Manual. Enjoy!

Part IV

Other FreeMIDI Releases

Chapter 10 Using Other FreeMIDI Releases with Performer

This section provides information about the following software updates:

- Unisyn 1.1
- MTP II Console 1.1 (for the MIDI Time Piece II interface)
- MIDI Express Console 1.1 (for the MIDI Express interface)

These updates are available free of charge to all registered users of these products. They provide support for FreeMIDI, the integrated MIDI operating system upon which Performer Version 5 is based. In some cases, other non-FreeMIDI features have been added as well, free of charge.

Performer Version 5 does not require these versions. You can use earlier versions if you like without losing any capabilities. These versions (and higher), however, provide the benefits of working with FreeMIDI. For an overview of these benefits, see the "Introducing FreeMIDI" on page 41, as well as the introductions in following update chapters.

Chapter 11

Unisyn 1.1 Update Notes

New features

All new features in Unisyn 1.1 have been added to accommodate FreeMIDI. These changes are:

- All Profiles have been updated
- Device Setup is simplified
- MIDI Setup is controlled by FreeMIDI
- Standard FreeMIDI commands have been added to Unisyn's command set

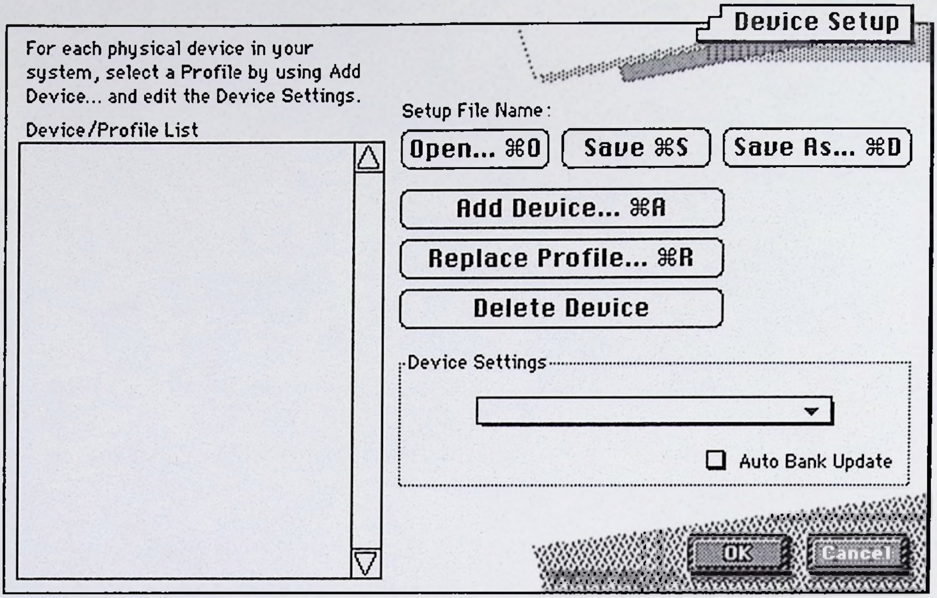
Device Setup

The first time you launch Unisyn 1.1 after installation, you will need to create a Device Setup file. You are prompted to do this by the appearance of the Device Setup dialog box.

To create a Device Setup file:

1. **Launch Unisyn 1.1 for the first time by double-clicking its icon.**

   The Device Setup dialog appears:



For each physical device in your system, select a Profile by using Add Device... and edit the Device Settings.

Device Setup
Device/Profile List
Setup File Name:
Open... ⌘O
Save ⌘S
Save As... ⌘D
Add Device... ⌘A
Replace Profile... ⌘R
Delete Device
Device Settings
☐ Auto Bank Update
OK
Cancel

Figure 11-1: Device Setup Dialog Box

2. **Click Add Device or type command-A.**

   A standard Macintosh File Open dialog appears:

3. **Navigate to your Profiles Folder containing the new Unisyn Profiles and select a profile for one of your MIDI devices.**

4. **Click Open.**

   The Profile name appears in the Device Setup dialog devices list. When profiles are added to the Device Setup, Unisyn tries to automatically match the profile to its corresponding FreeMIDI

Device from your current FreeMIDI Configuration. So when you add a Profile, Unisyn displays a FreeMIDI Device in the Device Settings pop-up menu.

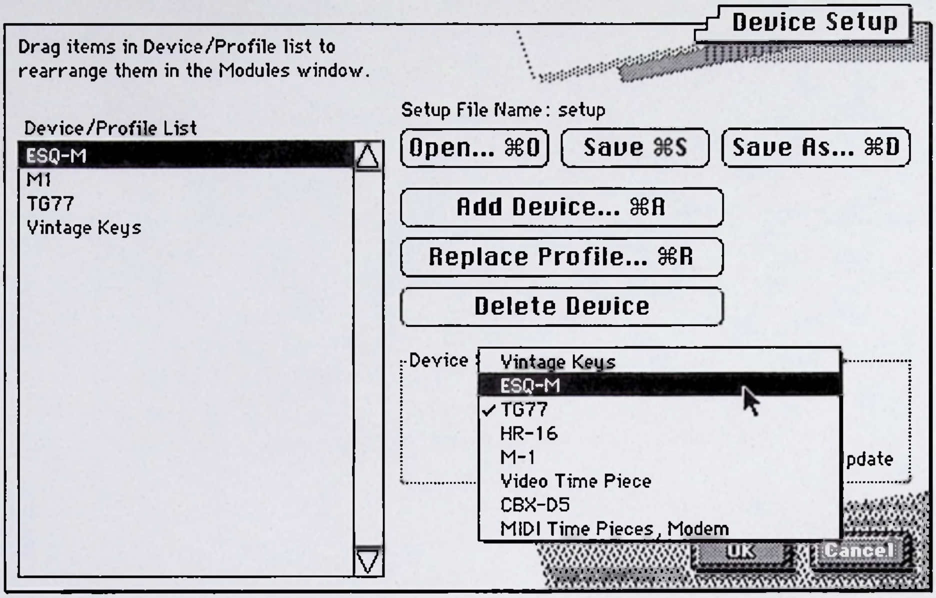

Device Setup
Drag items in Device/Profile list to rearrange them in the Modules window.
Device/Profile List
ESQ-M
M1
TG77
Vintage Keys
Setup File Name: setup
Open... ⌘O
Save ⌘S
Save As... ⌘D
Add Device... ⌘A
Replace Profile... ⌘R
Delete Device
Device
Vintage Keys
ESQ-M
✓ TG77
HR-16
M-1
Video Time Piece
CBX-D5
MIDI Time Pieces, Modem
pdate
OK
Cancel

Figure 11-2: Device Settings Pop-up Menu

If the FreeMIDI Device displayed in the pop-up menu is correct, proceed back to Step 2 above and add more profiles until you have completed the Device Setup. If the FreeMIDI Device displayed in the pop-up menu is incorrect, choose the correct FreeMIDI Device from the menu and then proceed back to Step 2 above and add more profiles until you have completed the Device Setup.

☛ In Unisyn 1.1, Auto Bank Update is enabled for all devices by default. We recommend using this setting for all devices in order to produce the best results when using FreeMIDI's patch lists. For more information on Auto Bank Update, consult your original Unisyn user's manual.

5. **When you have added all the profiles needed for your MIDI setup, click Save to save the Device Setup file to disk.**

   A standard Mac File Save dialog box appears.

6. **Name the Setup file, navigate to the Data Folder contained in the Unisyn 1.1 Folder and click Save.**

7. **Click OK to close the Device Setup dialog box and proceed with use Unisyn 1.1.**

MIDI Setup

MIDI Setup is now controlled by FreeMIDI. Use the FreeMIDI Setup application to make changes to your MIDI Setup as outlined in the FreeMIDI update notes. The MIDI Setup command has been replaced by the *Interface Settings* command.

Use the *Interface Settings* command to open the Interface Settings dialog box. This dialog box is the same dialog box that appears in other FreeMIDI applications and will control FreeMIDI's access to the serial ports of your Macintosh for all FreeMIDI applications. This dialog box allows you to enable and disable the two serial ports for MIDI. If, for instance, you have a printer attached to the Thru port of your MTP II and the MTP II is connected to the Printer serial port, you will need to disable MIDI on the printer port in order to do any printing.

Transport Controls

The Transport Controls window contains buttons that can control the transport functions (Play, Stop, Rewind, Locate) of other FreeMIDI applications from within Unisyn. For instance, you might want to start a sequence playing in Performer while you are using Unisyn to audition various patches. You do so by opening the Transport Controls window, enabling FreeMIDI Sync, and clicking Play. With this feature there is no need to switch to Performer.

Once FreeMIDI Sync is enabled you can also stop or pause Performer, rewind the sequence, or auto-locate to up to 8 predefined positions within the sequence directly from Unisyn.

FreeMIDI Sync can be enabled from any FreeMIDI application that is currently open and that supports this feature of FreeMIDI. In Performer, this switch is in the Basics menu. When you enable FreeMIDI Sync in any open FreeMIDI application, it is enabled for all FreeMIDI applications on that Macintosh.

To use the Transport Controls:

1. **Choose *Transport Controls* from the Play Menu.**

   The Transport Controls window appears.

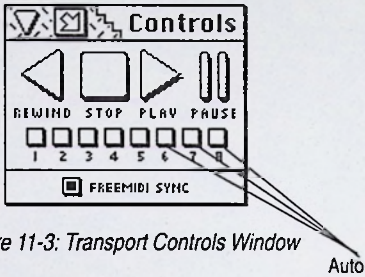


Figure 11-3: Transport Controls Window

Auto-locate buttons

2. **Click *FreeMIDI Sync* to enable FreeMIDI Sync.**

   You can skip this step if FreeMIDI Sync has already been enabled by some other FreeMIDI application. If it is already enabled, the FreeMIDI Sync check box appears selected (filled-in).

   ☛ The state of FreeMIDI Sync (ON or OFF) cannot be changed while a FreeMIDI application, such as Performer, is playing.

3. **Click the Transport Control function that you want to use.**

   Click Rewind, Play, Stop, or Pause to send those commands to the FreeMIDI application that you are controlling. The FreeMIDI application should respond to these commands as if you were using its own controls.

4. **If the FreeMIDI application that you are controlling supports their use, you can use any of the 8 auto-locate buttons to auto-locate to some pre-defined location in the sequence or song that is currently playing.**

   In Performer, you can define these auto-locate points in the Markers window. Assign a number from 1-8 for a marker in the Seek column and that marker's location in the sequence will be defined as one of the 8 FreeMIDI auto-locate points. Click the corresponding button in the Transport Controls window and Performer will locate to that point. You can auto-locate at any time, even during playback.

Edit FreeMIDI Configuration

There is an *Edit FreeMIDI Configuration* command in the MIDI menu. Choosing this command will launch the FreeMIDI Setup application (or switch to FreeMIDI Setup if it is already open) and display the current FreeMIDI Configuration. There is a Return command in FreeMIDI Setup (command-R) that will switch back to Unisyn if you entered FreeMIDI Setup using the *Edit FreeMIDI Configuration* command. Please note that this feature is only supported in System 7 and higher.

Chapter 12 *MTP II Console 1.1 Update Notes*

Changes to MTP II Console 1.1 from Version 1.03 have been made to accommodate the FreeMIDI System. Other new features have been added as well. These changes are:

- Serial Port Setup is controlled by FreeMIDI
- Standard FreeMIDI commands have been added to MTP II Console's command set
- Cable Names are produced by FreeMIDI
- The current Base Setup or Modifier name displays in the title bar of other windows [new MTP II feature]
- MIDI Cannon [new MTP II feature]
- Custom Pedal Curves [new MTP II feature]

Serial Port Setup

Serial Port setup is now controlled by FreeMIDI. The Serial Ports window and its corresponding command in the Windows menu have been removed. Additionally, all the command key equivalents in the Windows menu have changed accordingly. Use the FreeMIDI Setup application to control which serial ports the MTP II Console will search for MTP and MTP II interfaces as outlined in the FreeMIDI reference chapter.

Interface Settings

Use the *Interface Settings* command in the Utilities menu to open the Interface Settings dialog box. This dialog box is the same dialog box that appears in other FreeMIDI applications and will control FreeMIDI's access to the serial ports of your Macintosh for all FreeMIDI applications. This dialog box allows you to enable and disable the two serial ports for MIDI. If, for instance, you have a printer attached to the Thru port of your MTP II and the MTP II is connected to the Printer serial port, you will need to disable MIDI on the printer port in order to do any printing.

Transport Controls

The Transport Controls window contains buttons that can control the transport functions (Play, Stop, Rewind, Locate) of other FreeMIDI applications from within MTP II Console. For instance, you might want to start a sequence playing in Performer while you are using MTP II Console to edit Modifiers. You do so by opening the Transport Controls window, enabling FreeMIDI Sync, and clicking Play. With this feature there is no need to switch to Performer.

Once FreeMIDI Sync is enabled you can also stop or pause Performer, rewind the sequence, or auto-locate to up to 8 predefined positions within the sequence directly from MTP II Console.

FreeMIDI Sync can be enabled from any FreeMIDI application that is currently open and that supports this feature of FreeMIDI. In Performer, this switch is in the Basics menu. When you enable FreeMIDI Sync in any open FreeMIDI application, it is enabled for all FreeMIDI applications on that Macintosh.

> ☛ The state of FreeMIDI Sync (ON or OFF) cannot be changed while a FreeMIDI application, such as Performer, is playing.

To use the Transport Controls:

1. **Choose *Transport Controls* from the Windows menu.**

   The Transport Controls window appears.

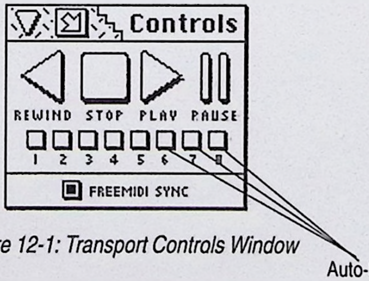


Figure 12-1: Transport Controls Window

Auto-locate buttons

2. **Click *FreeMIDI Sync* to enable FreeMIDI Sync.**

   You can skip this step if FreeMIDI Sync has already been enabled by some other FreeMIDI application. If it is already enabled, the FreeMIDI Sync checkbox appears selected (filled-in).

☛ The state of FreeMIDI Sync (ON or OFF) cannot be changed while a FreeMIDI application, such as Performer, is playing.

3. **Click the Transport Control function that you want to use.**

   Click Rewind, Play, Stop, or Pause to send those commands to the FreeMIDI application that you are controlling. The FreeMIDI application should respond to these commands as if you were using its own controls.

4. **If the FreeMIDI application that you are controlling supports their use, you can use any of the 8 auto-locate buttons to auto-locate to some pre-defined location in the sequence or song that is currently playing.**

   In Performer, you can define these auto-locate points in the Markers window. Assign a number from 1-8 for a marker in the Seek column and that marker's location in the sequence will be defined as one of the 8 FreeMIDI auto-locate points. Click the corresponding button in the Transport Controls window and Performer will locate to that point. You can auto-locate at any time, even during playback.

Edit FreeMIDI Configuration

There is an *Edit FreeMIDI Configuration* command in the Utilities menu. Choosing this command will launch the FreeMIDI Setup application (or switch to FreeMIDI Setup if it is already open) and display the current FreeMIDI Configuration. There is a Return command in FreeMIDI Setup (command-R) that will switch back to MTP II Console, if you entered FreeMIDI Setup using the *Edit FreeMIDI Configuration* command. Please note that this feature is only supported in System 7 and higher.

Cable Names Produced by FreeMIDI

Cable names in the Cable Routing, Channel Mapping, Event Muting, Knobs & Pedals, Patch List, MIDI Cannon, and Setups & Modifiers windows are produced by FreeMIDI. MTP II Console gets the names of each input and output cable from the names of connected FreeMIDI Devices. Use FreeMIDI Setup application to change these names.

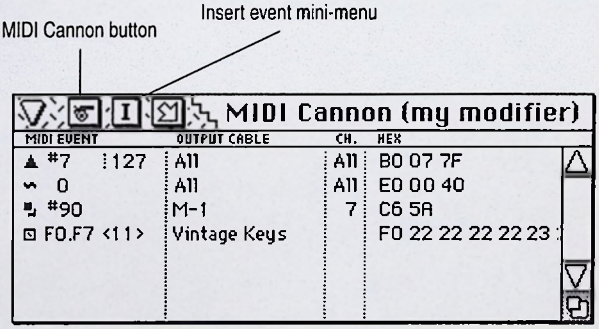
Current Preset Display

The name of the currently selected preset appears in parentheses in the Cable Routing, Channel Mapping, Event Muting, SMPTE Controls, Pedal & Click, and Setups & Modifiers windows. This makes it easier to know which Preset is currently selected without opening or finding the Presets window.

MIDI Cannon

The MIDI Cannon allows you to store a group of MIDI events in a Modifier to be sent to any or all MIDI devices on an MTP network when the Modifier becomes current. There are two ways to make a Modifier current, by selecting it in the Setups & Modifiers window and by selecting an MTP II patch with a patch change command. Please consult your original MTP II user's manual for more information on Modifiers and Patches.

Open the MIDI Cannon window by selecting its command from the Windows menu.



MIDI EVENT	OUTPUT CABLE	CH.	HEX
▲ #7 127	All	All	B0 07 7F
~ 0	All	All	E0 00 40
#90	M-1	7	C6 5A
⊡ F0.F7 <11>	Vintage Keys		F0 22 22 22 22 23

Figure 12-2: MIDI Cannon Window

This window allows you to add, edit, and delete MIDI events in a specific MIDI Cannon message. It also allows you to test the current MIDI Cannon message.

Creating MIDI Cannon Messages

To create a MIDI Cannon message:

1. **Select or create a Modifier in which you wish to store the MIDI Cannon message.**

   See your original MTP II user's manual for more information on selecting and creating Modifiers.

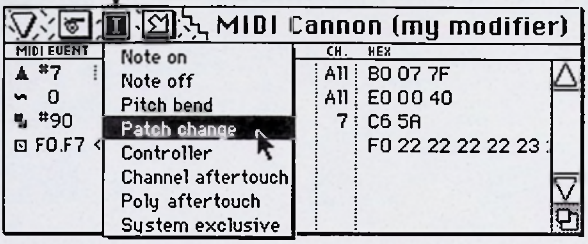
2. **Select MIDI Cannon from the Windows menu.**

   The MIDI Cannon window appears.

3. **Select a MIDI event from the Insert mini-menu**

   You can select any type of MIDI data that is in the mini-menu.

Insert mini-menu


MIDI Cannon (my modifier)
MIDI EVENT
CH.
HEX
Note on
Note off
Pitch bend
Patch change
Controller
Channel aftertouch
Poly aftertouch
System exclusive

```
#7     All  B0 07 7F
0      All  E0 00 40
#90    7    C6 5A
F0.F7       F0 22 22 22 22 23
```

Figure 12-3: Insert mini-menu

4. **Edit the values of the newly inserted event.**

   For instance, if you inserted a patch change event, you will need to enter the patch change number you want, or if you entered a controller event, you will need to enter the controller number and the value you want. Each event type has a different set of fields for entering the desired values.

5. **Assign a Cable and Channel (CH) for the event by using the Cable and Channel pop-up menus.**

6. **Add more MIDI events by repeating steps 3-5 until all the MIDI events that you want in this message are displayed in the MIDI Cannon window.**

   You can add as many events as you like up to the maximum size for the Modifier.

   ☛ the maximum size for a Modifier is determined by the amount of free RAM in the MTP II's memory. Please consult your original MTP II user's manual for more information.

7. **Test the MIDI Cannon message by clicking the MIDI Cannon button.**

   All of the MIDI events in the list are transmitted to the assigned cables and channels.

8. **If the MIDI Cannon message is correct, save the Modifier and "MIDI Cannon message" appears in the script for that Modifier in the Setups & modifiers window.**

Editing MIDI Cannon Messages

You can edit MIDI Cannon messages that you have already created in two ways.

- Remove the MIDI Cannon message from the Modifier and then create a new MIDI Cannon message for that Modifier.
- Change the MIDI events in a MIDI Cannon message.

To remove a MIDI Cannon message from a modifier:

1. **Make the Modifier that contains the MIDI Cannon message you wish to edit current by selecting it in the Setups & Modifiers window.**

2. **Select the MIDI Cannon message line in the script for the Modifier and type delete or backspace on your Mac keyboard.**

   The MIDI Cannon message is removed and you can then open the MIDI Cannon window to insert a new MIDI Cannon message as described above in "Creating MIDI Cannon Messages" on page 162 in this chapter.

To change the events in a MIDI Cannon message:

1. **Make the Modifier that contains the MIDI Cannon message you wish to edit current by selecting it in the Setups & Modifiers window.**

2. **Open the MIDI Cannon window.**

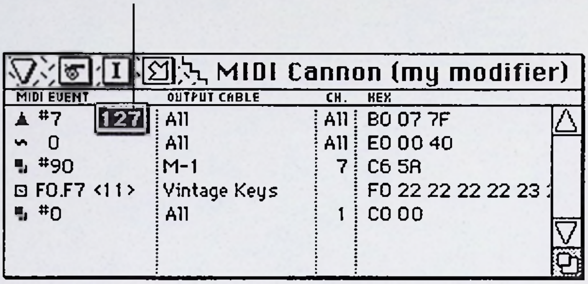
   The MIDI Cannon message appears as a list of MIDI events.

3. **Select MIDI events in the list and type delete or backspace on your Mac keyboard to remove them.**

   Alternately, you can use the Clear command in the Edit menu to remove MIDI events from the list.

4. **Double-click events and type to change their values.**

   A double-clicked event pops-up for editing as illustrated below.



Double-click and enter a new value here

MIDI Cannon (my modifier)

MIDI EVENT		OUTPUT CABLE	CH.	HEX
#7	127	All	All	B0 07 7F
0		All	All	E0 00 40
#90		M-1	7	C6 5A
F0.F7 <11>		Vintage Keys		F0 22 22 22 22 23
#0		All	1	C0 00

Figure 12-4: Editing a MIDI event

5. **Use the Cable and Channel pop-up menus to change the MIDI destination for an event.**

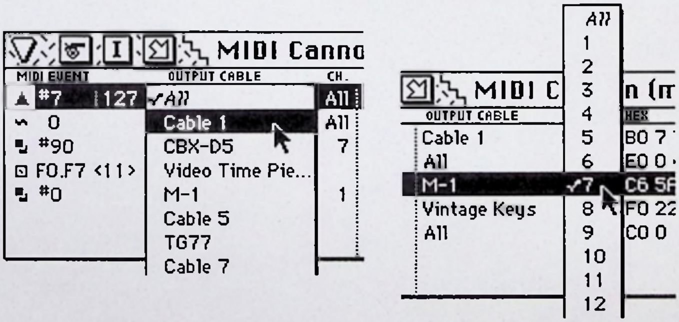

MIDI Canno
MIDI EVENT
OUTPUT CABLE
CH.
#7 127
✓All
Cable 1
CBX-D5
Video Time Pie...
M-1
Cable 5
TG77
Cable 7
All
All
7
1
0
#90
F0.F7 <11>
#0
MIDI C
n (m
OUTPUT CABLE
HEX
Cable 1
All
M-1
Vintage Keys
All
All
1
2
3
4
5
6
✓7
8
9
10
11
12
B0 7
E0 0
C6 5A
F0 22
C0 0

Figure 12-5: Changing Cables and Channels for a MIDI event

6. **Test the MIDI Cannon message by clicking the MIDI Cannon button.**

   All of the MIDI events in the list are transmitted to the assigned cables and channels.

7. **If the MIDI Cannon message is correct, save the Modifier and "MIDI Cannon message" appears in the script for that Modifier in the Setups & modifiers window.**

Custom Pedal Curves

Custom pedal curves can now be created and saved within Modifiers to allow the MTP II's Pedal inputs to react in a non-linear manner to control voltage foot pedals. When Pedal A or B input is assigned to be controlled by a Korg or Roland Expression-type foot pedal, you can make a custom pedal curve for that pedal in the Pedal Curves window. The Knobs & Pedals window contains a new check box to toggle whether a pedal input uses the current custom pedal curve.

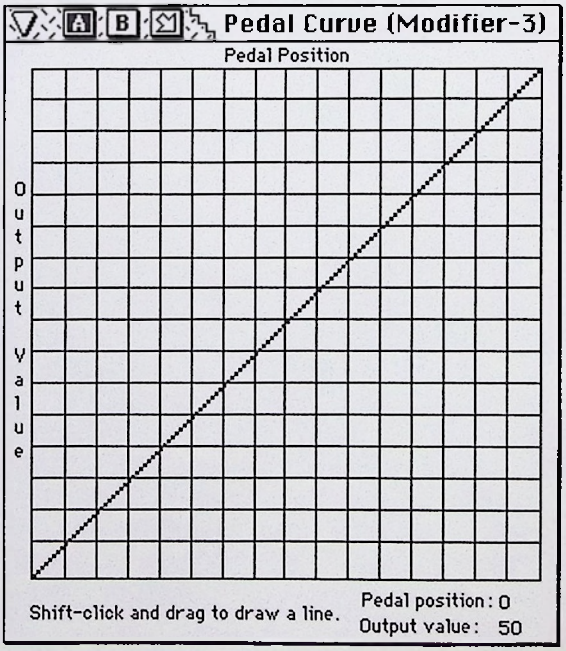
To make a custom pedal curve:

1. **Select or create a Modifier in which you wish to store the pedal curve.**

   To save a pedal curve, it must be part of a Modifier. Pedal curves cannot be saved as part of Base Setup. See your original MTP II user's manual for more information on selecting and creating Modifiers.

2. **Choose Pedal Curve from the Windows menu.**

   The Pedal Curve window appears.



Pedal Curve (Modifier-3)

Shift-click and drag to draw a line.

Pedal position: 0

Output value: 50

Figure 12-6: Pedal Curve

3. **Choose the pedal, A or B, for which you wish to create a custom pedal curve, by clicking A or B in the Pedal Curve window title bar.**

   The current pedal curve for the selected pedal displays.

4. **Use the mouse to draw a new curve.**

   Shift-click and drag the mouse to draw a straight line.

5. **Save the Modifier and "Pedal Curve Message" appears in the script for that Modifier in the Setups & modifiers window.**

   The custom pedal curve is saved as part of the modifier.

Chapter 13

MIDI Express Console 1.1 Update Notes

Most of the changes to MIDI Express Console 1.1 from Version 1.01 were made to accommodate the FreeMIDI System. These changes are:

- Serial Port Setup is controlled by FreeMIDI
- Standard FreeMIDI commands have been added to MIDI Express Console's command set
- Cable Names are produced by FreeMIDI
- The current Preset name displays in the title bar of other windows

Serial Port Setup

Serial Port Setup is now controlled by FreeMIDI. The Serial Ports window and its corresponding command in the Windows menu have been removed. Additionally, all the command key equivalents in the Windows menu have changed accordingly. Use the FreeMIDI Setup application to control which serial ports the MIDI Express Console will search for MIDI Express interfaces as outlined in the FreeMIDI reference chapter.

Interface Settings

Use the *Interface Settings...* command in the Utilities menu to open the Interface Settings dialog box. This dialog box is the same dialog box that appears in other FreeMIDI applications and will control FreeMIDI's access to the serial ports of your Macintosh for all FreeMIDI applications. This dialog box allows you to enable and disable the two serial ports for MIDI. If, for instance, you have a printer attached to the Thru port of your MIDI Express and the MIDI Express is connected to the Printer serial port, you will need to disable MIDI on the printer port in order to do any printing.

Transport Controls

The Transport Controls window contains buttons that can control the transport functions (Play, Stop, Rewind, Locate) of other FreeMIDI applications from within MIDI Express Console. For instance, you might want to start a sequence playing in Performer while you are using MIDI Express Console to edit presets. You do so by opening the Transport Controls window, enabling FreeMIDI Sync, and clicking Play. With this feature there is no need to switch to Performer.

Once FreeMIDI Sync is enabled you can also stop or pause Performer, rewind the sequence, or auto-locate to up to 8 predefined positions within the sequence directly from MIDI Express Console.

FreeMIDI Sync can be enabled from any FreeMIDI application that is currently open and that supports this feature of FreeMIDI. In Performer, this switch is in the Basics menu. When you enable FreeMIDI Sync in any open FreeMIDI application, it is enabled for all FreeMIDI applications on that Macintosh.

> ☛ The state of FreeMIDI Sync (ON or OFF) cannot be changed while a FreeMIDI application, such as Performer, is playing.

To use the Transport Controls:

1. **Choose *Transport Controls...* from the Windows menu.**

   The Transport Controls window appears.

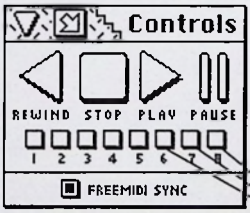


Figure 13-1: Transport Controls Window

2. **Click *FreeMIDI Sync* to enable FreeMIDI Sync.**

   You can skip this step if FreeMIDI Sync has already been enabled by some other FreeMIDI application. If it is already enabled, the FreeMIDI Sync checkbox appears selected (filled-in).

   > ☛ The state of FreeMIDI Sync (ON or OFF) cannot be changed while a FreeMIDI application, such as Performer, is playing.

3. **Click the Transport Control function that you want to use.**

   Click Rewind, Play, Stop, or Pause to send those commands to the FreeMIDI application that you are controlling. The FreeMIDI application should respond to these commands as if you were using its own controls.

4. **If the FreeMIDI application that you are controlling supports their use, you can use any of the 8 auto-locate buttons to auto-locate to some pre-defined location in the sequence or song that is currently playing.**

   In Performer, you can define these auto-locate points in the Markers window. Assign a number from 1-8 for a marker in the Seek column and that marker's location in the sequence will be defined as one of the 8 FreeMIDI auto-locate points. Click the corresponding button in the Transport Controls window and Performer will locate to that point. You can auto-locate at any time, even during playback.

Edit FreeMIDI Configuration

There is an *Edit FreeMIDI Configuration...* command in the Utilities menu. Choosing this command will launch the FreeMIDI Setup application (or switch to FreeMIDI Setup if it is already open) and display the current FreeMIDI Configuration. There is a Return command in FreeMIDI Setup (command-R) that will switch back to MIDI Express Console, if you entered FreeMIDI Setup using the *Edit FreeMIDI Configuration...* command. Please note that this feature is only supported in System 7 and higher.

Cable Names Produced by FreeMIDI

Cable names in the Cable Routing, Channel Mapping, Event Muting, Pedal & Click, and Presets windows are produced by FreeMIDI. MIDI Express Console gets the names of each input and output cable from the names of connected FreeMIDI Devices. Use FreeMIDI Setup application to change these names.

Current Preset Display

The name of the currently selected preset appears in parentheses in the Cable Routing, Channel Mapping, Event Muting, SMPTE Controls, Pedal & Click, and Presets windows. This makes it easier to know which Preset is currently selected without opening or finding the Presets window.

Part V

Appendices

Appendix A Using FreeMIDI with OMS

OMS Compatibility

FreeMIDI is compatible with the Opcode MIDI System™ (OMS). If you currently use OMS and it is required for OMS applications that are not yet FreeMIDI-compatible, you have two options:

Option:	Explanation:	Pros and cons:
Option 1: Keep both FreeMIDI and OMS in your System, and set each to "Allow other applications".	In this scenario, FreeMIDI and OMS peacefully coexist with no interaction whatsoever. You maintain two studio configuration files, one for OMS and one for FreeMIDI. You'll continue to use OMS normally, and FreeMIDI operates as if OMS wasn't even there.	Cons: you have to maintain two separate studio configuration files: one for OMS and one for FreeMIDI. OMS and FreeMIDI applications can't send and receive MIDI at the same time. Pros: this method maintains the MIDI processing features available with the Studio 4 and Studio 5. Also, with OMS present, you can more easily put the Studio 4 and 5 into "MTP" emulation mode, which is required with FreeMIDI.
Option 2: Remove OMS, install the FreeMIDI OMS Emulator, and have FreeMIDI emulate OMS.	You completely remove OMS from your System by dragging the System extension out of the System folder. You then install a replacement for it, the *FreeMIDI OMS emulator*. FreeMIDI then looks like OMS to OMS applications: they share the FreeMIDI studio configuration, and they function just like they do with OMS. For example, all of your FreeMIDI devices appear in each OMS application in the same places that OMS devices would.	Pros: all applications share the FreeMIDI studio configuration file, and all applications can send and receive MIDI at the same time. Cons: the MIDI processing features in the Studio 4 and Studio 5 become unavailable. Also, if you have a Studio 4 or 5, you still have to run OMS once before using FreeMIDI to put them into "MTP" emulation mode. Note: As of this writing, Galaxy, Opcode's universal editor/librarian software, does not share patch lists with FreeMIDI, so Galaxy patches will not show up in FreeMIDI applications like Mosaic and Performer. Galaxy patch lists, can, however, still be shared with Vision when using this option.

Emulating OMS

FreeMIDI emulates Opcode MIDI System (OMS) in the following way. You install a system extension called OMS Emulator, along with the FreeMIDI System Extension and other FreeMIDI System files and restart your Macintosh and FreeMIDI will then appear to be OMS to your OMS applications.

> ☛ Before proceeding with OMS Emulation, you should put your Studio 4 or Studio 5 MIDI interface (if you have one) into "MTP emulation" mode and then remove OMS by dragging the OMS Extension out of your System folder and restarting your Mac.

To install the OMS Emulator extension:

1. **Disable all Control Panel Devices and Extensions, including virus protection utilities such as SAM, Virex, Vaccine, Disinfectant, or GateKeeper during the installation process.**

   These files can sometimes interfere with installation. To do so under System 7, restart or turn on your Macintosh with the shift key held down until you see the message, "Extensions Off", which appears right after "Welcome to Macintosh". Doing so turns off all extensions until the computer is restarted. Under System 6, remove all non-Apple INIT's and Control Panel devices from your System Folder and then Restart your Macintosh. It is especially important to do this right before you install the program and authorize the hard disk. Once the program has been installed and authorized, you can re-enable them.

2. **Insert the Performer master disk and run the installer.**

   The installer is the icon called "Double-click to install".

3. **Click OK when the installer logo screen appears.**

4. **Click Customize.**

   This produces the Custom install window where you can select individual files to be installed.

5. **Click the Drive as necessary in order for the current drive selected to be the disk which contains your System Folder.**

6. **Select the OMS Emulator file from the scrolling list on the left side of the window.**

7. **Click Install.**

8. **When the Install is complete, you will be asked to Restart your Macintosh. Click Restart.**

   OMS Emulator installation is completed.

Once OMS Emulator is installed, all your OMS applications should work as if OMS were present only they will use your FreeMIDI Configuration to communicate with your MIDI gear.

Appendix B FreeMIDI and MIDI Manager

FreeMIDI is MIDI Manager-compatible. However, we strongly recommend that you only use MIDI Manager if you have a program that absolutely *requires* it. MIDI Manager eats up a considerable amount of extra CPU processing power and makes your MIDI system much more complex. And you won't lose any capabilities by not using MIDI Manager because FreeMIDI does everything that MIDI Manager does (and a lot more, too).

> ☛ If you have applications that need to run simultaneously (such as digidesign's Sample Cell™ software together with Performer), and the programs support FreeMIDI or OMS, you don't need MIDI Manager.

If you absolutely require MIDI Manager…

If you require MIDI Manager, please read this entire chapter. This chapter makes three assumptions:

- You have already created a FreeMIDI Configuration and are familiar with the majority of FreeMIDI's features and commands. If you are not familiar with FreeMIDI or have not yet created FreeMIDI Configuration, please see chapter 5, "Getting Started With FreeMIDI ™" before proceeding.
- MIDI Manager is correctly installed and functioning. Consult your Apple MIDI Manager user's manual for information on installing and using MIDI Manager.
- You understand how MIDI Manager functions.

If you need to use MIDI Manager-only applications that are not yet FreeMIDI-compatible, you need to install FreeMIDI's MIDI Manager Driver. This file is called *FreeMIDI MM Driver*. Once the FreeMIDI MM Driver is installed, you use the PatchBay application to connect all your MIDI Manager-compatible applications to FreeMIDI.

The FreeMIDI MM Driver allows you to add up to 4 output and 10 input ports for playing MIDI between MIDI Manager and FreeMIDI. The output ports route MIDI data from FreeMIDI sources (devices or applications) to the MIDI Manager port. The input ports route MIDI data from MIDI Manager to FreeMIDI destinations (device or applications).

Remove all other drivers before you start

Before starting to use FreeMIDI and MIDI Manager together, we recommend that you remove the Apple MIDI driver and any other MIDI Manager drivers that may be installed. You will find these drivers in the top level of your System Folder or in the Extensions folder within your System Folder. It is best to let FreeMIDI handle all communication with the serial ports. If these other drivers are installed, you will get potentially confusing alerts as FreeMIDI and MIDI Manager both try to gain access to the serial ports.

Installing the FreeMIDI MM Driver

To install *FreeMIDI MM Driver*:

1. **Disable all Control Panel Devices and Extensions, including virus protection utilities such as SAM, Virex, Vaccine, Disinfectant, or GateKeeper during the installation process.**

   These files can sometimes interfere with installation. To do so under System 7, restart or turn on your Macintosh with the shift key held down until you see the message, "Extensions Off", which appears right after "Welcome to Macintosh". Doing so turns off all extensions until the computer is restarted. Under System 6, remove all non-Apple INIT's and Control Panel devices from your System Folder and then Restart your Macintosh. It is especially important to do this right before you install the program and authorize the hard disk. Once the program has been installed and authorized, you can re-enable them.

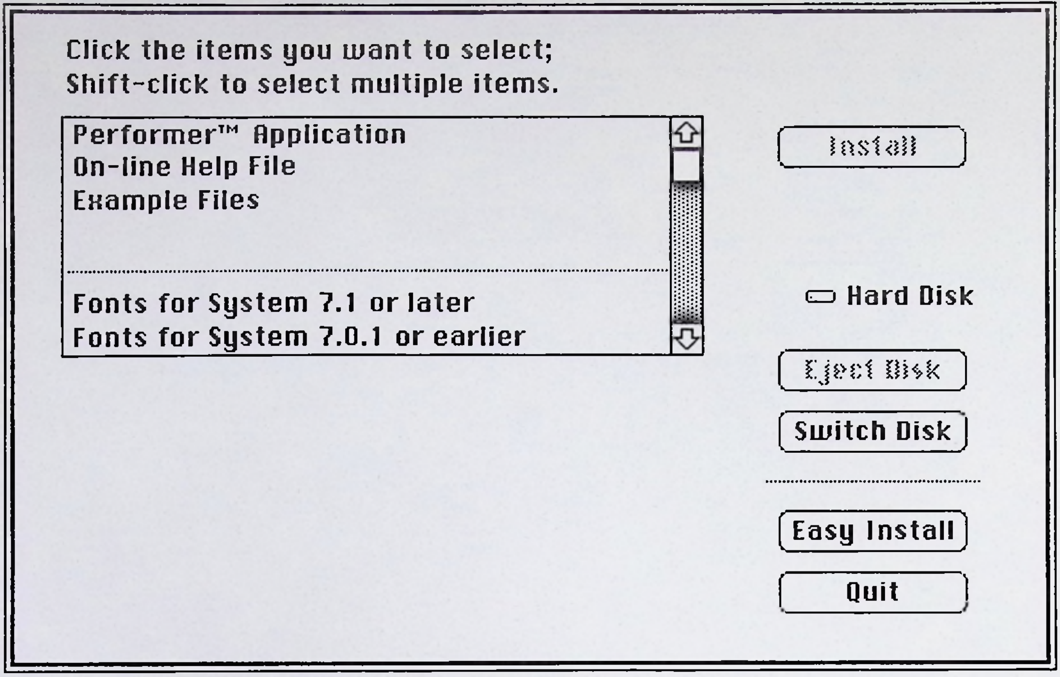
2. **Insert the Performer master disk and run the installer.**

   The installer is the icon called "Double-click to install".

3. **Click OK when the installer logo screen appears.**

4. **Click Customize.**

   The Custom install dialog box appears. Select individual files to be installed here.



Click the items you want to select;
Shift-click to select multiple items.

Performer™ Application
On-line Help File
Example Files

Fonts for System 7.1 or later
Fonts for System 7.0.1 or earlier

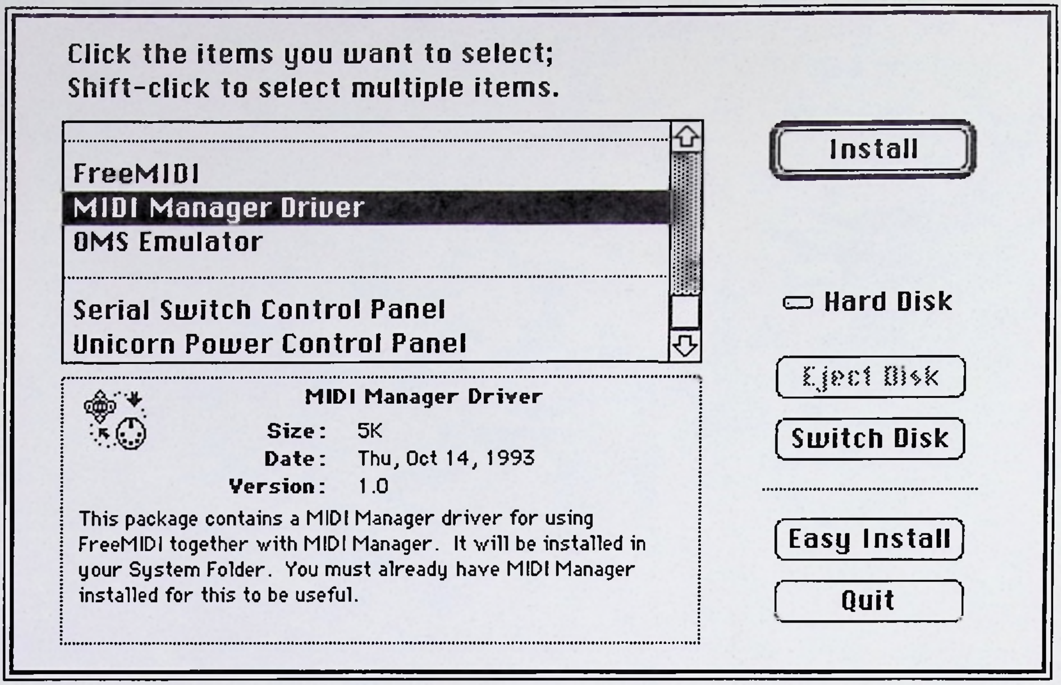
Install
Hard Disk
Eject Disk
Switch Disk
Easy Install
Quit

Figure 13-1: Custom Install Dialog Box

5. **Click Switch Disk as necessary in order for the current drive selected to be the disk that contains your System Folder.**

6. **Select the *FreeMIDI MM Driver* file from the scrolling list.**

   Some help text appears giving information about the file you select.



Click the items you want to select;
Shift-click to select multiple items.

FreeMIDI
MIDI Manager Driver
OMS Emulator
Serial Switch Control Panel
Unicorn Power Control Panel
Install
Hard Disk
Eject Disk
Switch Disk
Easy Install
Quit

MIDI Manager Driver

Size: 5K
Date: Thu, Oct 14, 1993
Version: 1.0

This package contains a MIDI Manager driver for using FreeMIDI together with MIDI Manager. It will be installed in your System Folder. You must already have MIDI Manager installed for this to be useful.

Figure 13-2: Selecting the FreeMIDI MM Driver

7. **Click Install.**

8. **When the install is complete, you will be informed of its status. You should Restart your Macintosh now in order to make FreeMIDI and MIDI Manager active.**

   The FreeMIDI MM Driver installation is completed.

Using the FreeMIDI MM Driver

To connect FreeMIDI to your MIDI Manager-compatible applications:

1. **Adjust the memory allocation for the PatchBay application in its Finder Get Info window.**

   We recommend allocating at least 128K to the PatchBay. Allocating even more memory seems the make the PatchBay less prone to crash or cause system errors.

☛ Only use the PatchBay application. The PatchBay DA does not function with the FreeMIDI MM Driver.

2. **Open PatchBay by double-clicking its icon in the Finder.**

   The PatchBay window appears with the FreeMIDI MM Driver installed.

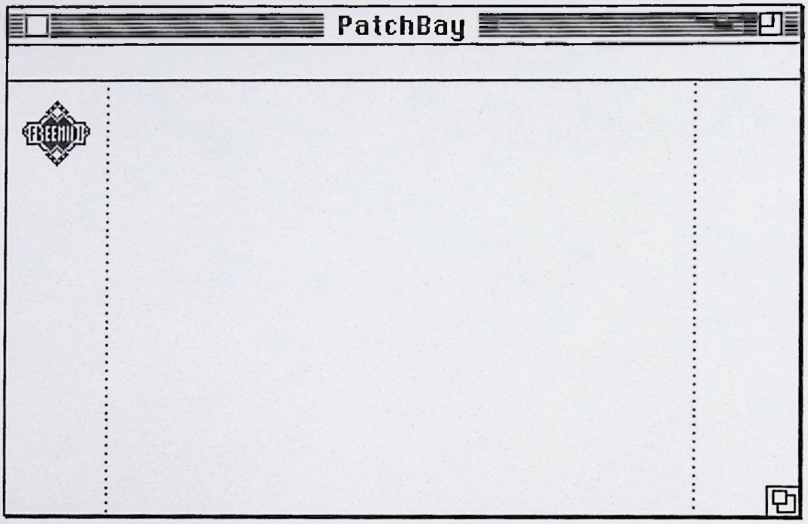
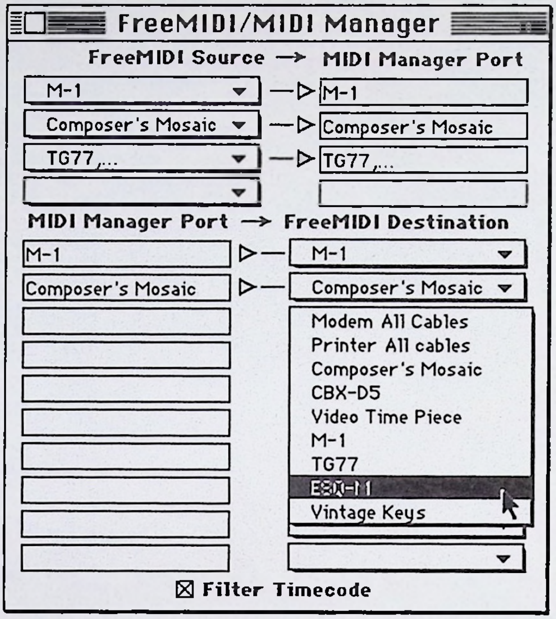


Figure 13-3: PatchBay Window

3. **Double-click the FreeMIDI MM Driver icon.**

   The FreeMIDI MM Driver Control Panel appears.


FreeMIDI/MIDI Manager
Modem All Cables
Printer All cables
Composer's Mosaic
CBX-D5
Video Time Piece
M-1
TG77
Vintage Keys

FreeMIDI Source	MIDI Manager Port
M-1	M-1
Composer's Mosaic	Composer's Mosaic
TG77,...	TG77,...

MIDI Manager Port	FreeMIDI Destination
M-1	M-1
Composer's Mosaic	Composer's Mosaic

☒ Filter Timecode

Figure 13-4: FreeMIDI MM Driver Control Panel

4. **Define up to 4 input and 10 output ports for the FreeMIDI MM Driver by choosing FreeMIDI devices and/or applications from the pop-up menus.**

   You can assign multiple devices/applications to the same port by selecting them from the same pop-up menu. Each selection will be retained and indicated by a check mark in the pop-up menu. By default, the name of the port is the same as the device/application selected. If more than one device/application is selected, the name is a list of all selected devices/applications truncated with an ellipsis. If you like, you can enter your own names for the ports in the text boxes in the MIDI Manager Port column.

   FreeMIDI MM Driver ports appear in the PatchBay window as they are defined.

5. **Close the FreeMIDI MM Driver Control Panel by clicking its close button.**

   The PatchBay window appears and the FreeMIDI MM Driver icon displays its input and output ports.

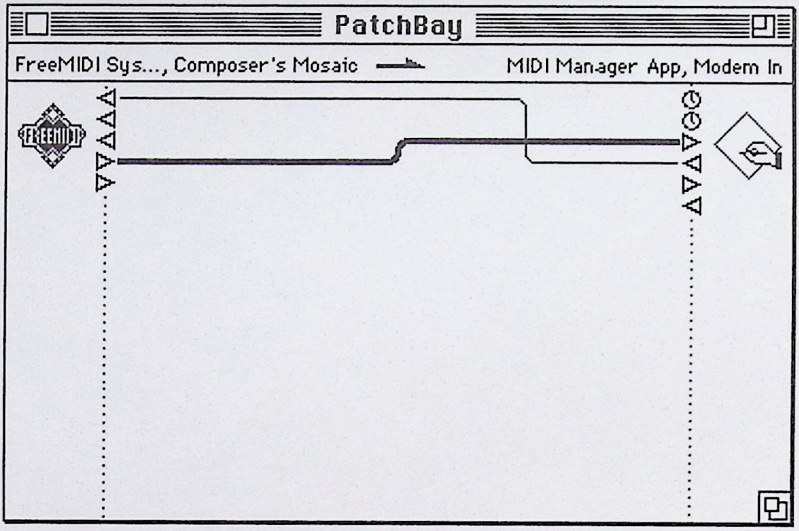

PatchBay
FreeMIDI Sys..., Composer's Mosaic
MIDI Manager App, Modem In
FREEMIDI

Figure 13-5: PatchBay Window with FreeMIDI ports

6. **Connect the outputs and inputs of your non-FreeMIDI MIDI Manager-applications to the FreeMIDI MM Driver outputs and inputs.**

   You can now send and receive MIDI between FreeMIDI and your MIDI Manager applications.

When the FreeMIDI MM Driver Control Panel is open in the PatchBay application, a FreeMIDI menu that contains some standard FreeMIDI commands, appears in the menu bar.

Appendix C Troubleshooting FreeMIDI

Troubleshooting

Troubleshooting is always simplest and most effective when the exact problem can be specified clearly and concisely. If you are surprised by an error message or by seemingly erratic behavior in the program, take a moment to jot down the relevant details: exactly what the error message said (including any error ID numbers), what actions were done on-screen just before the problem occurred, what kind of file you were working with, how you recovered from the problem, and any unusual conditions applying during the occurrence of the problem. This may not enable you to solve the problem at once, but will greatly aid in isolating the problem should it recur.

If the problem you are encountering seems inconsistent, try to determine what the necessary pattern of actions are that will cause it to occur. Genuine bugs in application software like FreeMIDI are almost always consistent in their manifestation: the same set of actions under the same conditions invariably brings about the same results. Determining the exact cause of a bug often requires experiments which replicate the problem situation with one factor changed: starting the program from a different disk drive, restarting the Macintosh with a system folder containing different versions of the System File and the Finder, working with a new configuration instead of an existing one, etc.

If the problem is truly inconsistent, then it is likely to be a hardware problem: improper disk drive alignment, a loose connection, over long cables, signal 'aliasing', etc.

The most important tools for tracking down problems are the Check Connections and PatchThru commands. Using these commands can isolate problems that stop the flow of MIDI data from your MIDI gear to the Macintosh and back again.

If screen display in a FreeMIDI sequencer such as Performer is erratic or seems to stall and skip: You may be running into the limits of your Mac's processing power. FreeMIDI gives priority to sending and receiving MIDI data over most screen redisplaying. However, with enough of an overload you may hear delays or erratic timing in your music.

Usually the overload is caused by vast reams of aftertouch (mono or poly key pressure), controller, or pitch bend events in one or more synthesizer tracks.

To solve the problem, you must reduce the amount of MIDI information being passed through the modem and/or printer port in the following ways:

- Slow down the tempo of the sequence during the problem passages.
- Delete a track or tracks from the sequence.

If FreeMIDI starts correctly, but you are unable to record (or play) anything: double-check your cable connections and synthesizer settings. Use the Check connections command to find out where the break in the data flow has happened. Often you will find that FreeMIDI may think that a certain device is connected to an incorrect MIDI port.

If you cannot open a particular configuration file: First try opening other existing configuration files, or a new configuration file, to be sure FreeMIDI is working at all. If a file is opened and seems damaged, will not let you save changes, etc., you still may be able to save some or all of its information by using the Clipboard to copy the devices and paste them into another configuration file.

If FreeMIDI Setup will not start up at all, or always brings up an irregular or damaged file when the FreeMIDI Setup icon is opened from the Finder, your working copy may be damaged. Re-install FreeMIDI from one of your Master disks. Restart the Macintosh and try opening another (new or existing) file with your new working copy to see if you have the same problem. Check also to see if other applications (Performer, MacWrite, MacPaint, etc.) are working properly.

If one of your key disks becomes damaged and fails to work as a key, our Customer Support Department will be glad to replace it. See the *Customer Support* section below for more information.

Disk Repairs

We are glad to replace damaged disks belonging to registered users. Please contact Mark of the Unicorn Technical support by phone, fax, or letter, if your disk needs to be repaired or replaced. Our Technical support phone number is: (617) 576-3066. Our Fax number is: (617) 576-3609. We also provide technical support on-line with CompuServe. You can talk to a MOTU technical support representative in the Section 12 of the MIDI Vendor C Forum.

Customer Support

We are happy to provide customer support to our registered users. If you haven't already done so, please take a moment to complete the registration card in the front of the manual and send it in to us. When we receive your card, you'll be placed on our mailing list and sent a free backup key disk.

Registered users who are unable, with their dealer's help, to solve problems they are encountering with FreeMIDI may call our technical support line. The number is (617) 576-3066, and is staffed Monday through Friday 9 AM to 8 PM, Eastern Time. If you decide to call, please have your FreeMIDI manual at hand, and be prepared to provide the following information to help us solve your problem as quickly as possible:

- **The serial number of the program.** This is printed on the cardboard page (at the front of the manual) which holds the registration card. Be sure to retain this page in the manual for your reference. You **must** be able to supply this number to receive technical support.
- **The version of FreeMIDI you are working with.** This is displayed briefly in the start-up screen when FreeMIDI is started; it is also available through the *About FreeMIDI* command on the Apple menu from within FreeMIDI.
- **A brief explanation of the problem,** including the exact sequence of actions which cause it, and the contents of any error messages which appear on the screen. It is often very helpful to have brief written notes to refer to.
- **The pages in the manual** which refer to the parts of the program which you are having trouble with.

- **The version or creation date of the system software you are using to run the Macintosh.** See the Installation Guide for help in finding version numbers for the system software.

We're not able to solve every problem immediately, but a quick call to us may yield a suggestion for a problem which you might otherwise spend hours trying to track down.

Our technical support telephone line is dedicated to helping registered users solve their problems quickly. In the past, many people have also taken the time to write to us with their comments, criticism and suggestions for improved versions of our software. We thank them; many of those ideas have been addressed in this version of FreeMIDI. If you have features or ideas you would like to see implemented in our music software, we'd like to hear from you. Please write to the FreeMIDI Development Team, Mark of the Unicorn Inc., 1280 Massachusetts Avenue, Cambridge, MA 02138.

Although we do not announce release dates and features of new versions of our software in advance, we will notify all registered users immediately by mail as soon as new releases become available. If you move from the address indicated on your registration card, please send us a note with your change of address so that we can keep you informed of future upgrades and releases.

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